CAR-854
Wireless 802.11 b/g
ADSL2/2+ Modem Router

User Manual

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1 Introduction

The ADSL2+ Wireless Router is a high-speed ADSL2+ Ethernet/Wireless router that is specifically designed to connect to the Internet and to directly connect to your local area network(LAN) via high-speed 10/100 Mbps Ethernet, or wireless LAN (WLAN). The ADSL2+ modem is compatible with the latest ADSL standards, including ADSL2 and ADSL2+, and supports up to 24 Mbps downstream and 1.5Mbps upstream to deliver true broadband speed and throughput. The DSL router supports wireless 802.11b/g and the following security protocols: WEP, WPA, WPA2, and 802.1x. To ensure fully compatibility, the DSL device was tested with all major DSLAMs, and support standard 10/100 Mbps Base-T Ethernet interface Auto MDI/MDIx 10/100 Switch function allowing user easily to link to PC or other Switches/Hubs. The DSL device is an idea solution for multi-users utilizing build-in channel mode (PPPoE/A, IPoA, IPoE), IP routing, NAT functionalities sharing the ADSL link. The DSL device is also a perfect solution for the residential users, it supports the users with bridge mode in host based PPPoE Client.

Package Content

◆ADSL2+ Router * 1
◆Dedicated Power Adaptor * 1
◆RJ-45 Ethernet cable * 1
◆RJ-11 telephone cable * 1
◆Installation CD * 1
◆Antenna * 1
◆Quick Installation Guide * 1

Warning!
Only use the power adapter provided in the package, otherwise it may cause hardware damage.

Front Panel

Wireless b/g and four port ADSL2/2+ Router

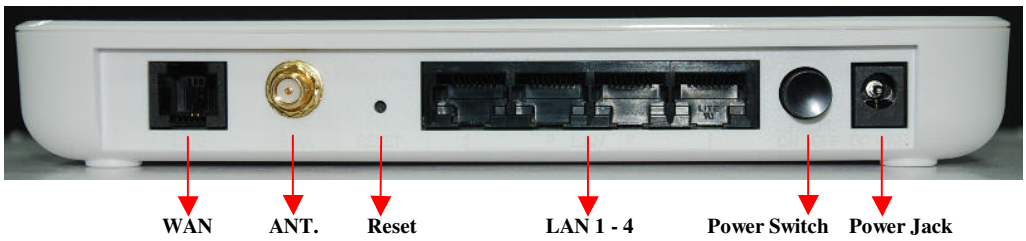
The LED Indicators read as below

LED NAME	Descriptions
POWER (Red light)	On: Power supply is connected and switch on.
ADSL (Orange light)	Blinking: Training with DSLAM. On: ADSL modem links to DSLAM successfully
LAN 1-4 (Green light)	On: ADSL modem has a successful Ethernet connection.

Rear Panel

Wireless-b/g and ADSL2+ Router- Four-Port

The rear panel of the ADSL2+ Router provides access to the DC power adapter, one USB connection, four LAN connections, one WAN connection, and power on/off switch.



1.1 Specifications

1.1.1 ADSL Standard

ITU-T G.992.1(G.dmt)
ANSI T1.413 Issue 2
G.992.2 (G.lite)
G.994.1 (G.hs)
Auto-negotiating rate adaptation
ADSL2 G.dmt.bis (G.992.3)
ADSL2 G.lite.bis (G.992.4)
ADSL2+ (G.992.5)

1.1.2 Wireless Features

Compliant with IEEE 802.11 B/G
Up to 54 Mbps wireless operation rate
64/128 bits WEP for security
WPA/WPA2 support
ACL (MAC address Filtering)

2. Hardware Installation

1. Connect the RJ-11 cable from ADSL2+ Router WAN port to DSLAM.
2. Connect the SMA from Diople Antenna.
3. Connect the RJ-45 cable from your PC to ADSL2+ Router LAN1-4 port.
4. Connect the power adapter from power jack to power outlet.
5. Push the power switch in “on” mode.

RJ-11 phone cable

RJ-45 Ethernet cable

power adapter

3. Connecting CAR-854 via Ethernet

Your router can be managed from anywhere with the embedded Web configuration using a Web browser, such as Microsoft Internet Explorer or Netscape Navigator. Internet Explorer 6.0 and later or Netscape Navigator 7.0 and later versions with JavaScript enabled should be used.

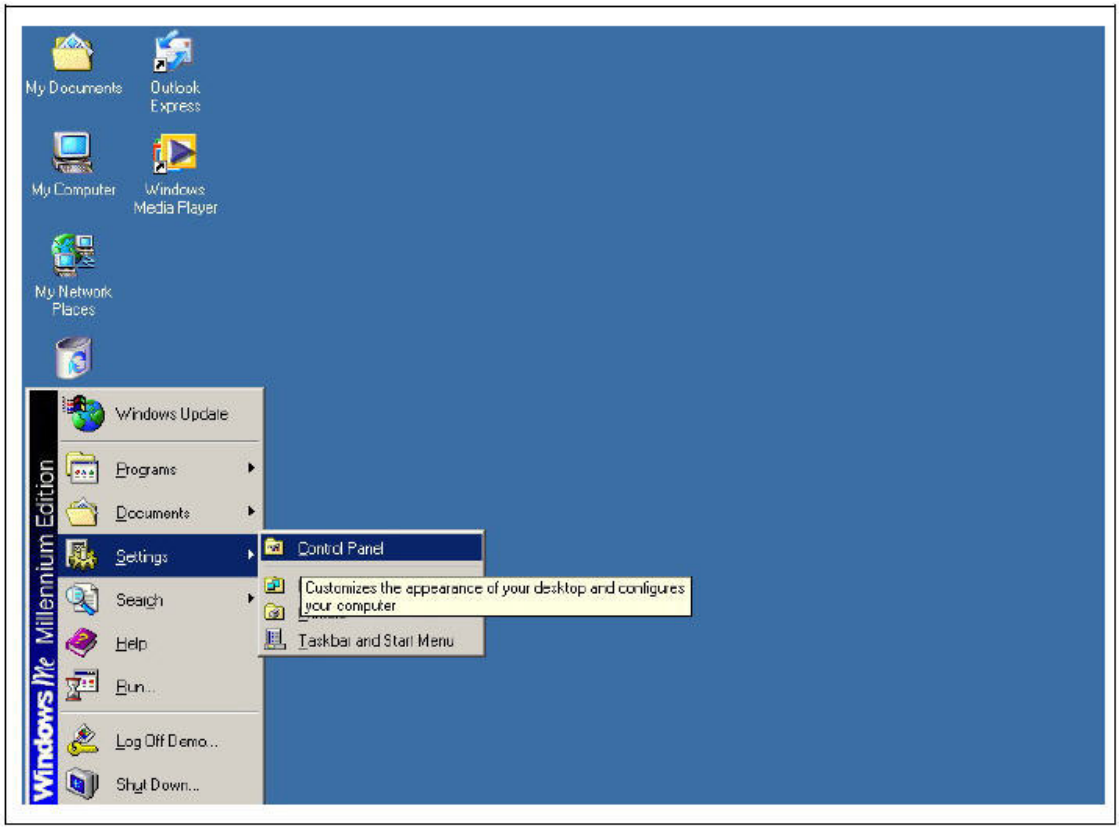
3.1. Setup CAR-854 via Ethernet Cable

If there is an available LAN card present in your PC, you just simply connect ADSL router and PC through the Ethernet cable. Once you establish internet connection, you could browse the Web through the Ethernet cable.

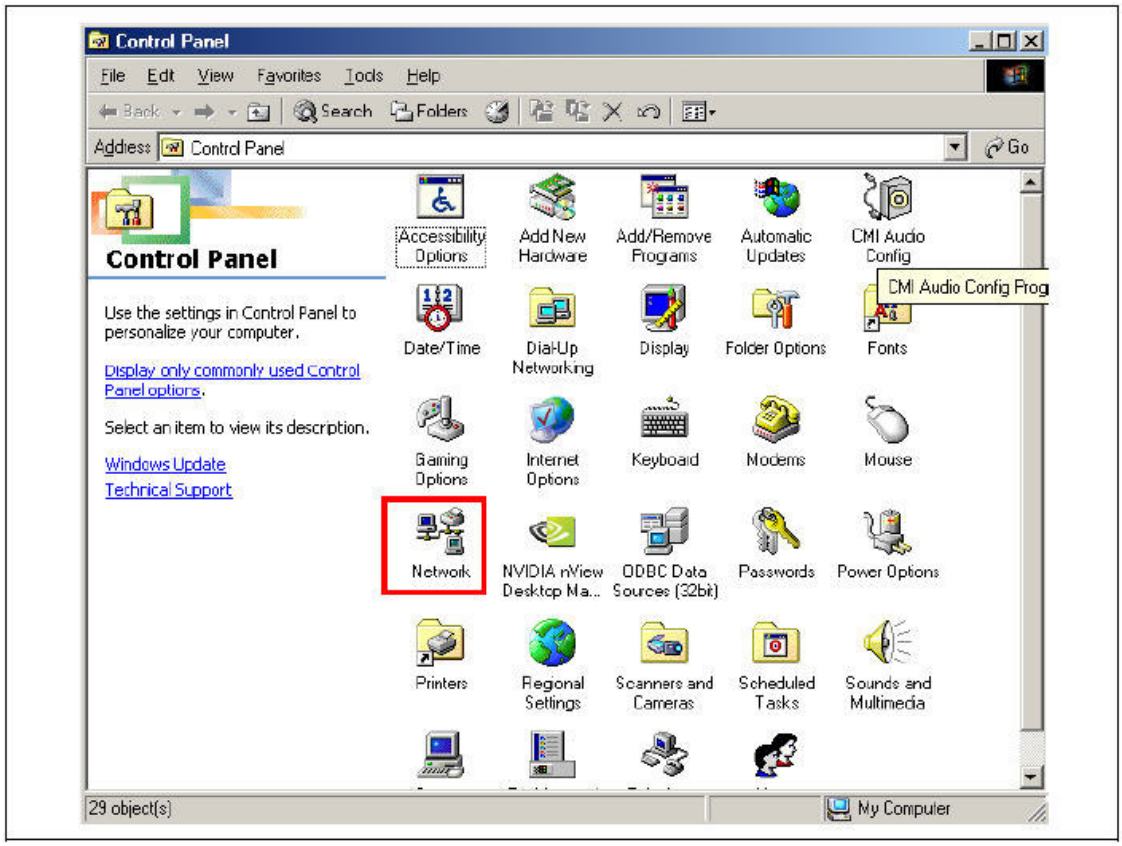
3.2. Configure TCP/IP

<For Windows 98SE and ME>

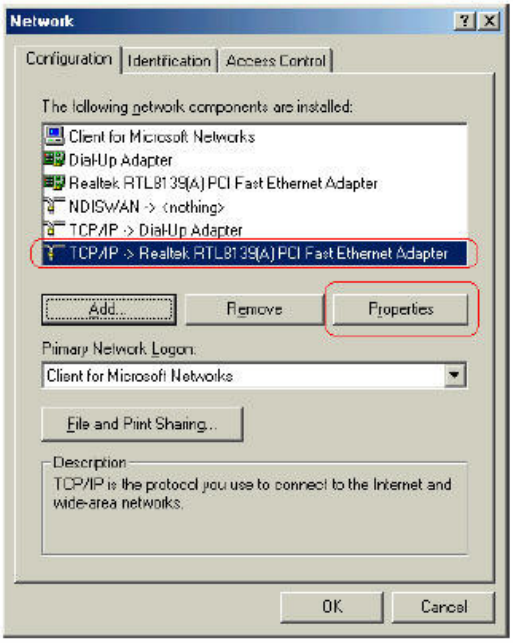
Step 1: Click **Start** then **Settings** and choose **Control Panel**



Step 2: Double click Network icon.



Step 3: Select Configuration tab, then choose TCP/IP from the list of installed network components and click properties button.

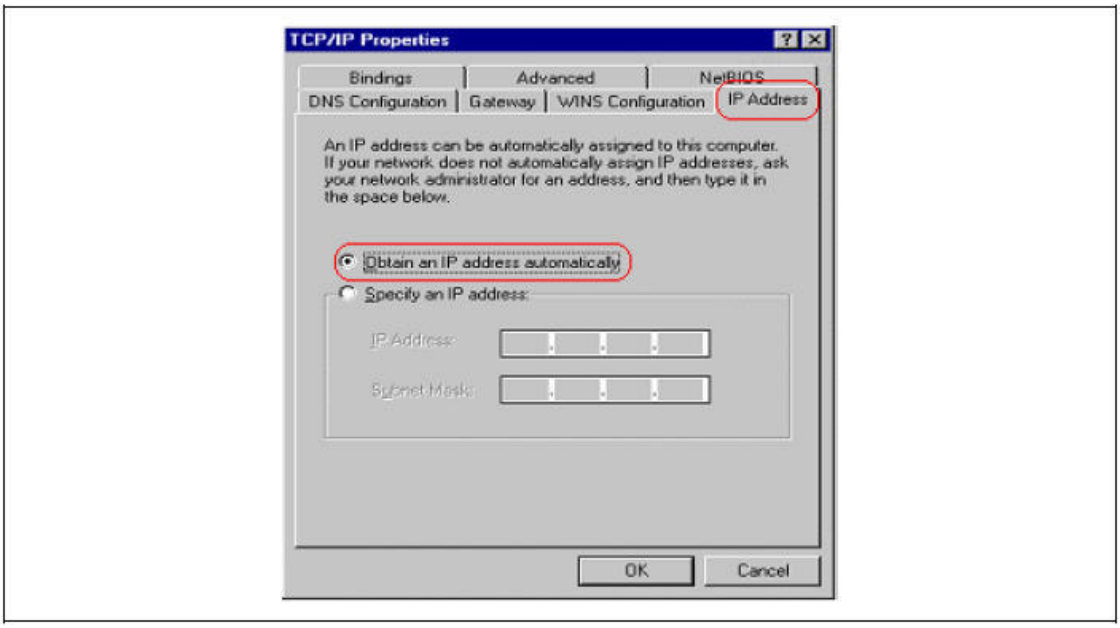


Step 4: You can setup the following configuration in two methods:

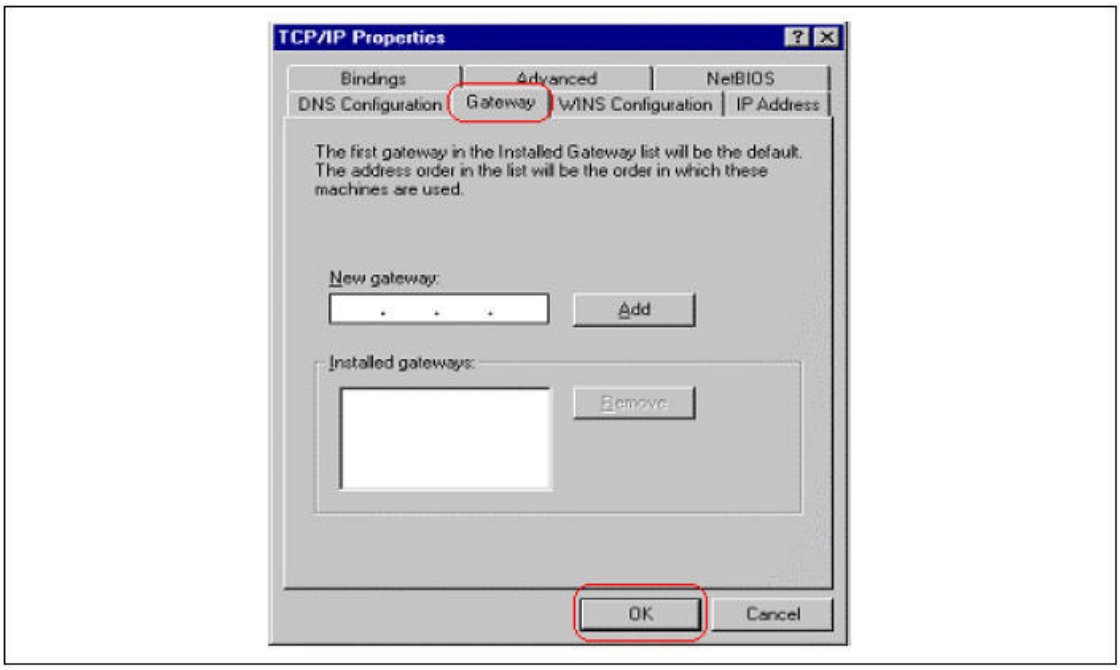
Option1: Get an IP from Router Automatically

Select the IP Address tab.

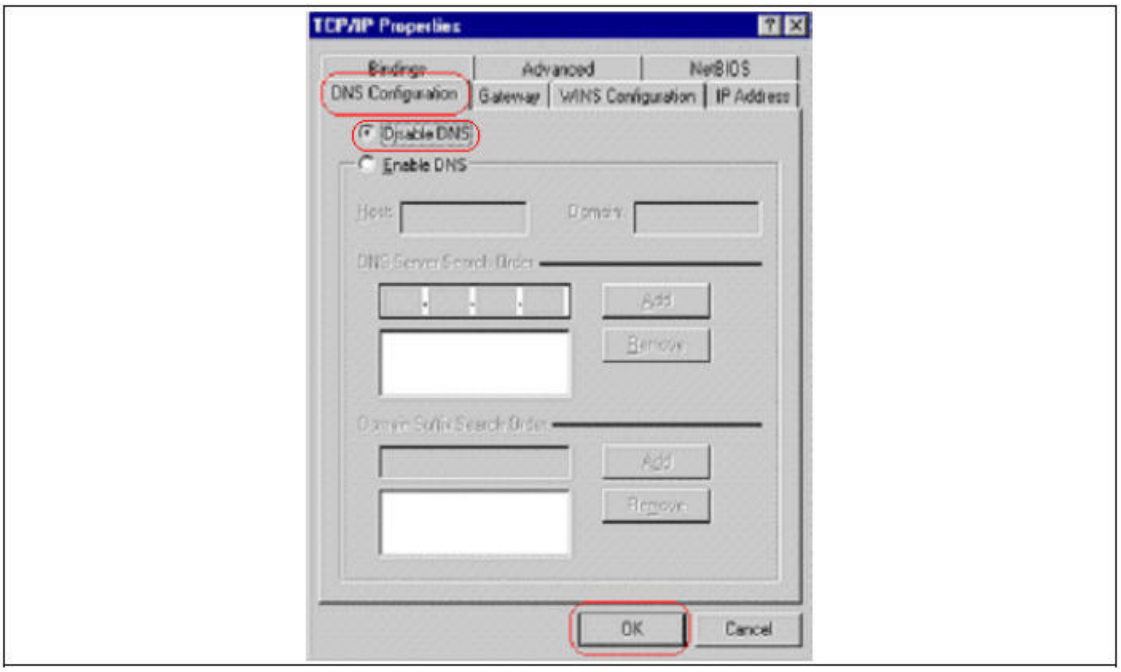
Select Obtain an IP address automatically and click OK.


TCP/IP Properties
Bindings
Advanced
NetBIOS
DNS Configuration
Gateway
WINS Configuration
IP Address
An IP address can be automatically assigned to this computer. If your network does not automatically assign IP addresses, ask your network administrator for an address, and then type it in the space below.
Obtain an IP address automatically
Specify an IP address:
IP Address:
Subnet Mask:
OK
Cancel

1) Select Gateway tab and click **OK**

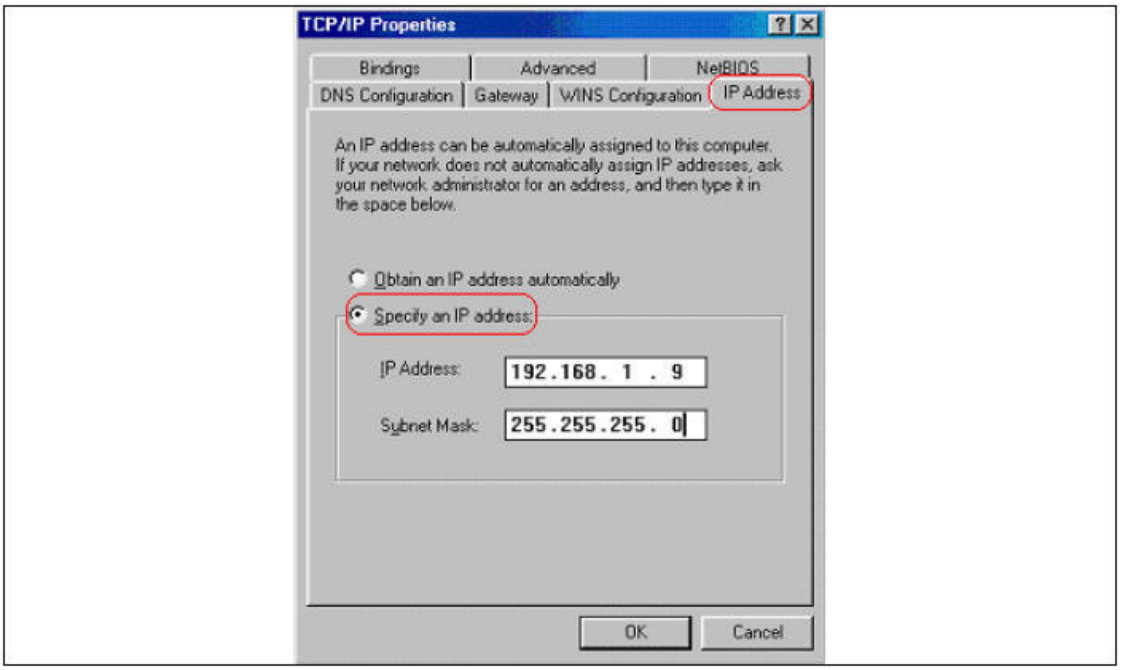


2) Then, select DNS Configuration tab and select disable DNS then click **OK** to finish the configuration.

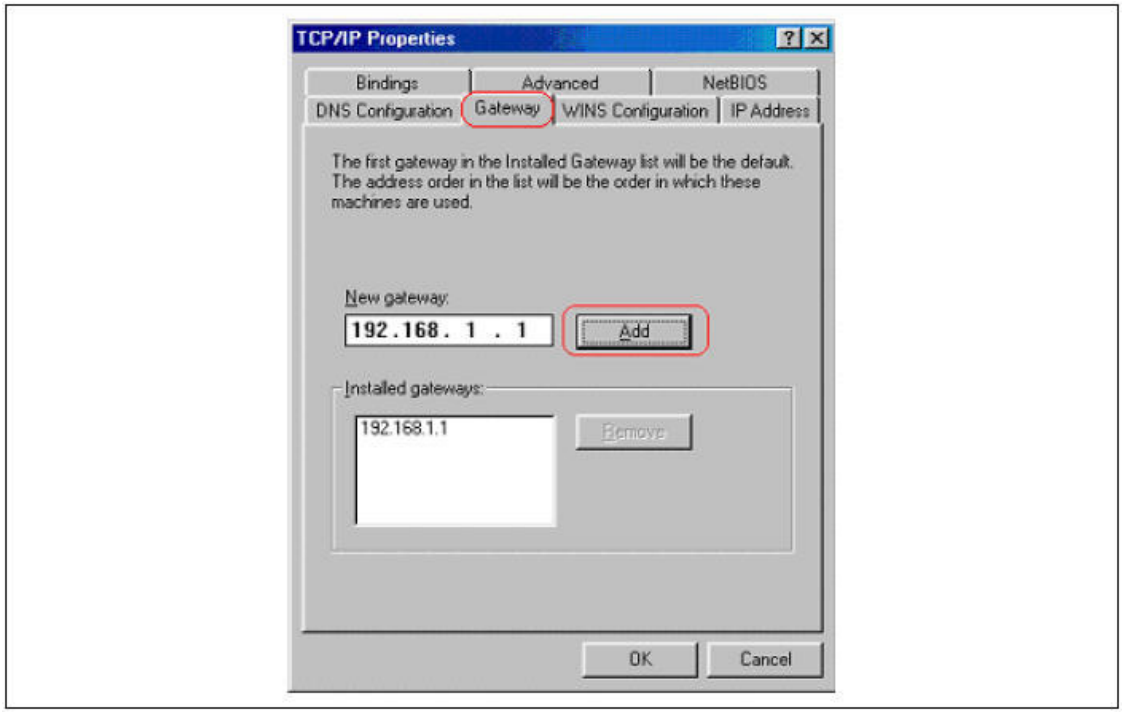


Option2: Configure IP Manually

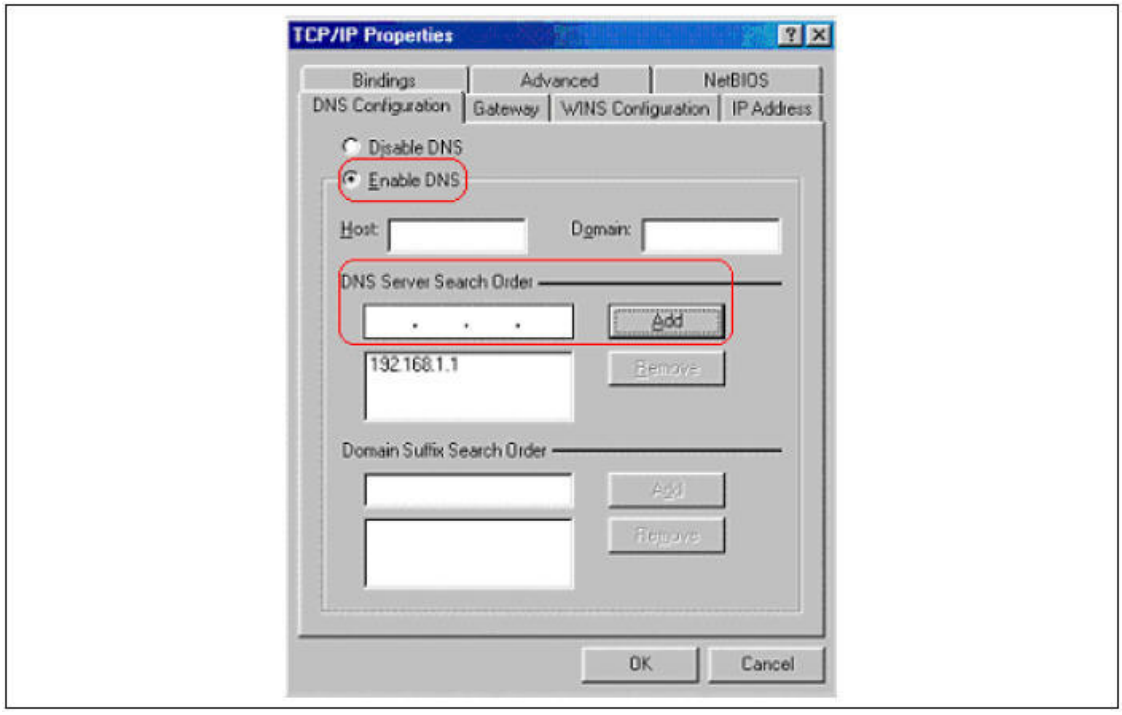
1) At IP Address tab, select specify an IP address, set default IP address as 192.168.1.X (X is a number between 2 to 254) in IP address field and 255.255.255.0 in Subnet Mask field.



2) Select Gateway tab and add default Router IP address "192.168.1.1" in the New gateway field and click Add.

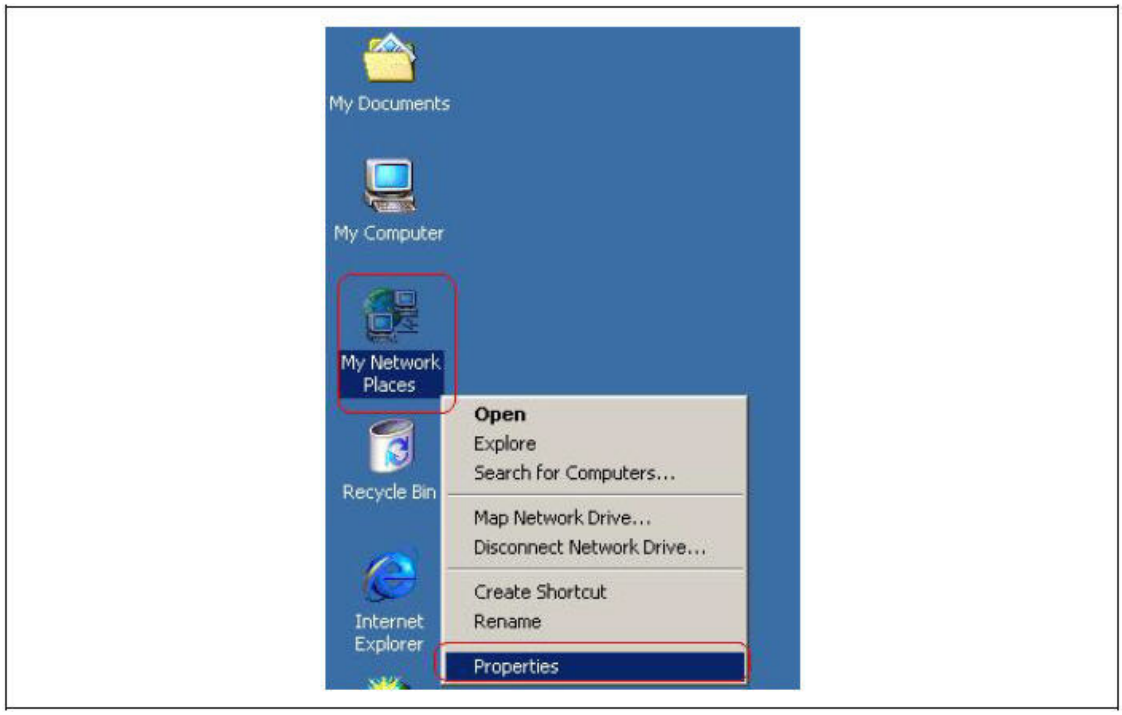


Under DNS configuration tab,select Enable DNS and add DNS values(192.168.1.1) in DNS server search order field then click add

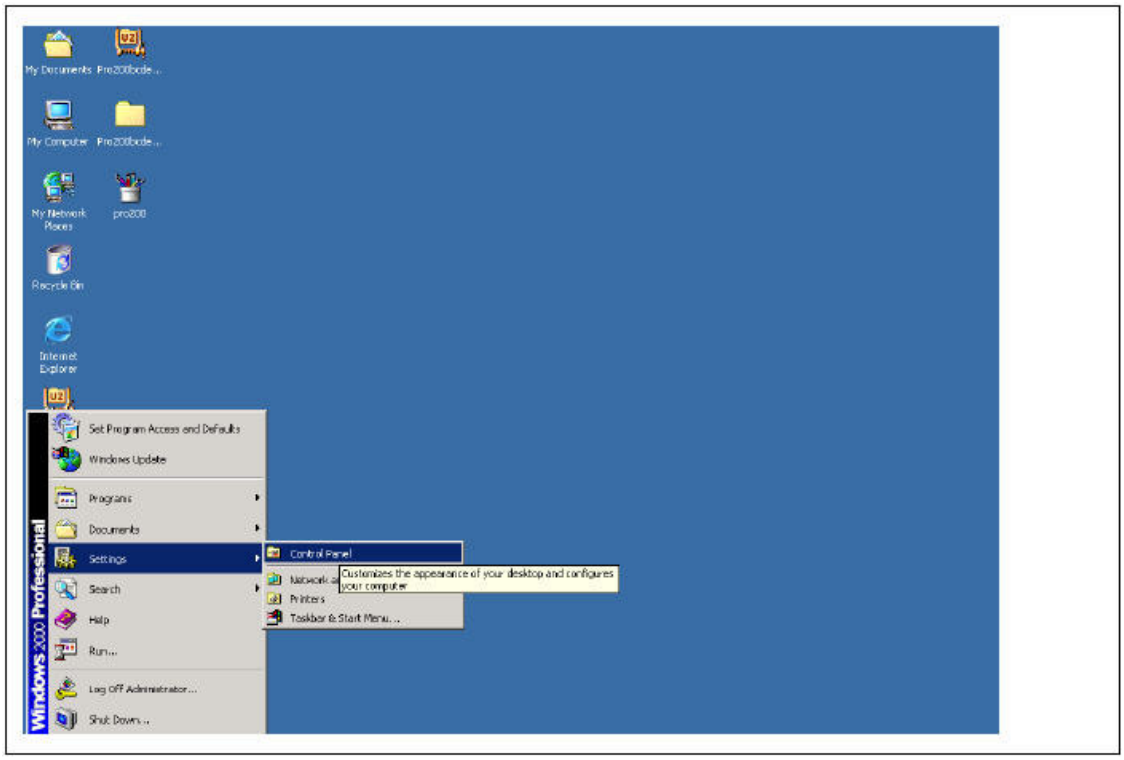


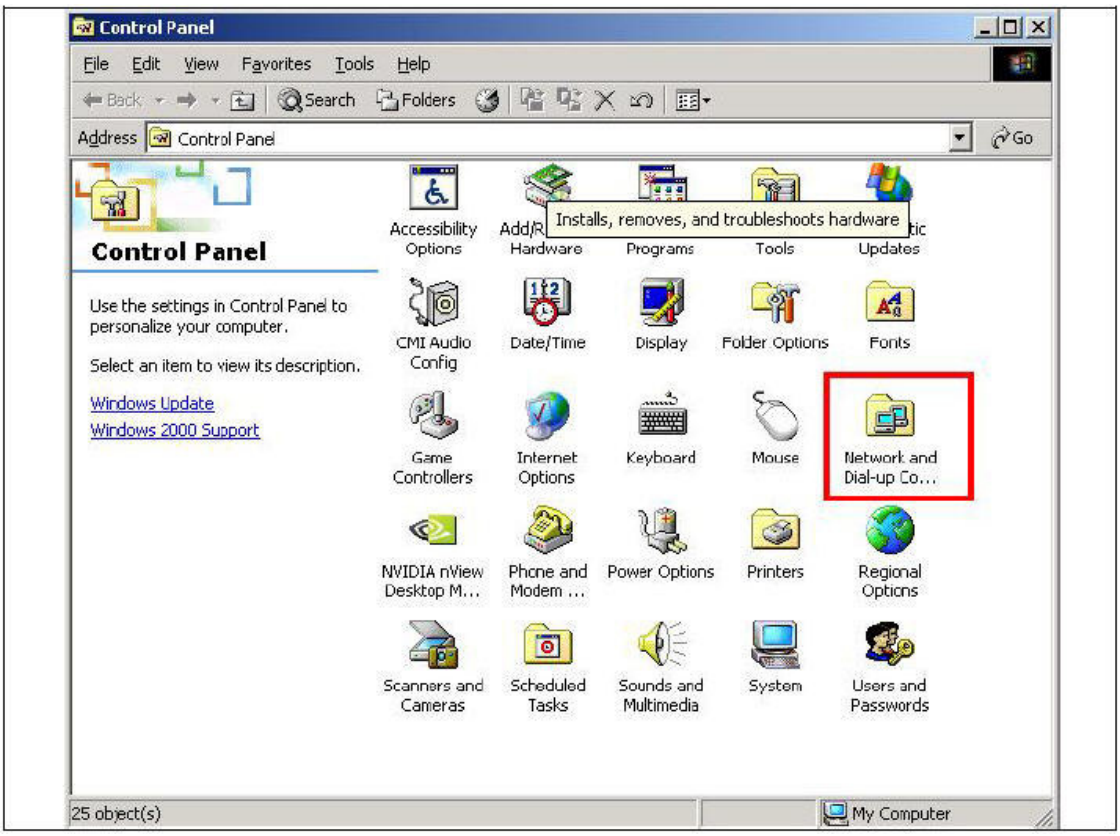
<For Windows 2000>

Step 1: (a) Right-click My Network Places and select Properties in the main window screen

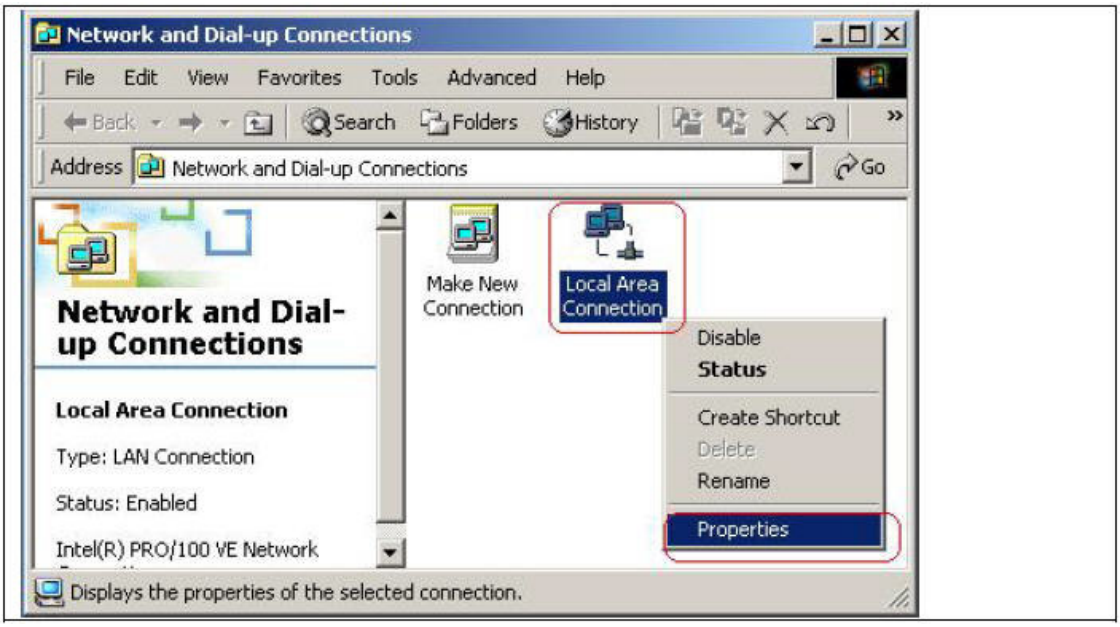


(b) Or, go to Start / Settings / Control Panel. In the Control Panel, double-click on Network and Dial-up Connections.

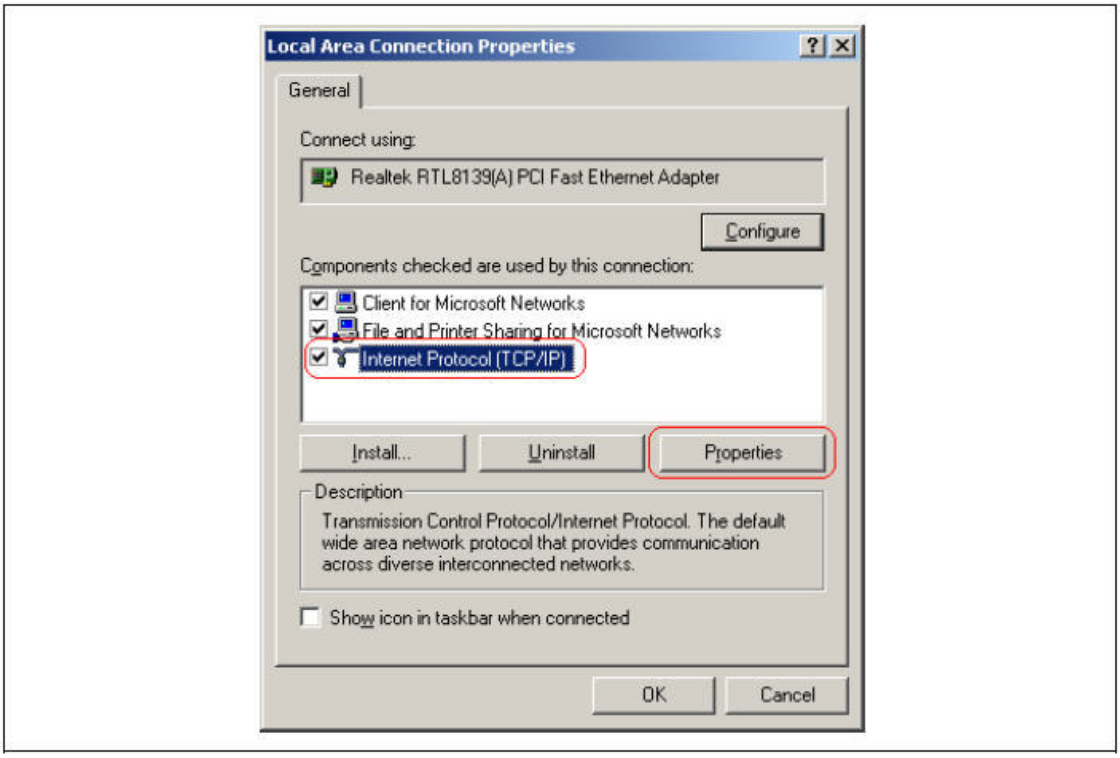




Step 2: Right-click Local Area Connection (your local network hooked up with ADSL router) and select properties

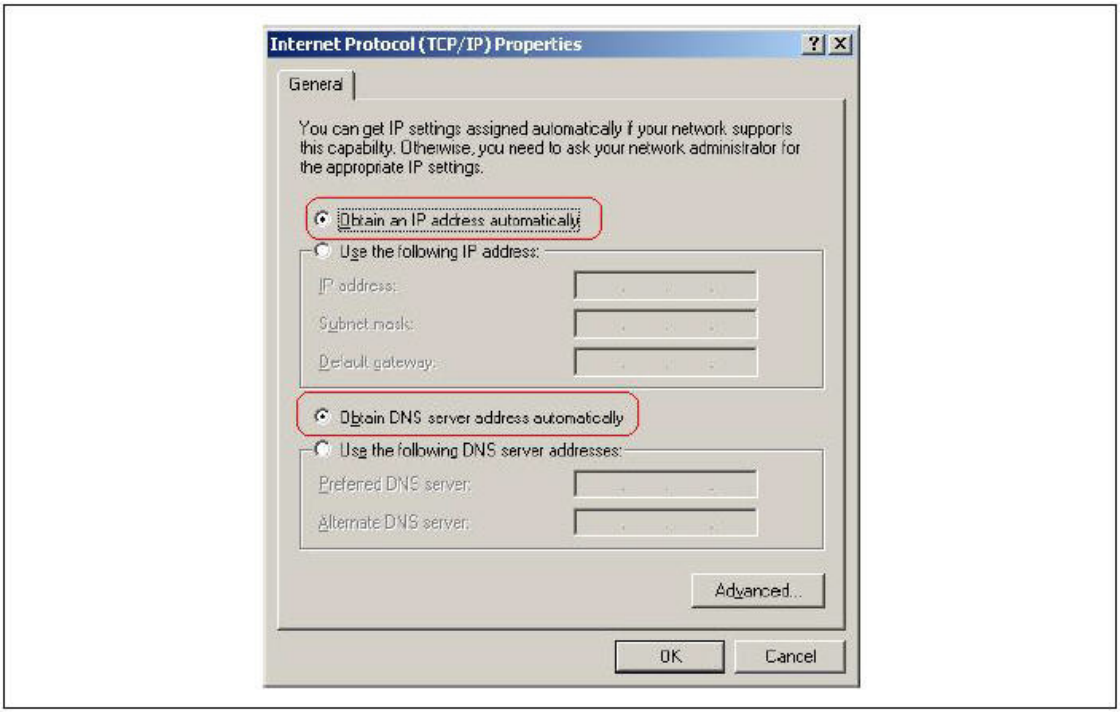


Step 3: Select internet protocol(TCP/IP) then click Properties



Configure IP Automatically:

Step 4: Select Obtain an IP address automatically and Obtain DNS server address automatically then click **OK** to complete IP configuring process.


Internet Protocol (TCP/IP) Properties
General
You can get IP settings assigned automatically if your network supports this capability. Otherwise, you need to ask your network administrator for the appropriate IP settings.
Obtain an IP address automatically
Use the following IP address:
IP address:
Subnet mask:
Default gateway:
Obtain DNS server address automatically
Use the following DNS server addresses:
Prefered DNS server:
Alternate DNS server:
Advanced...
OK
Cancel

Configure IP Manually:

Step 5: Select Use the following IP address and Use the following DNS server addresses.

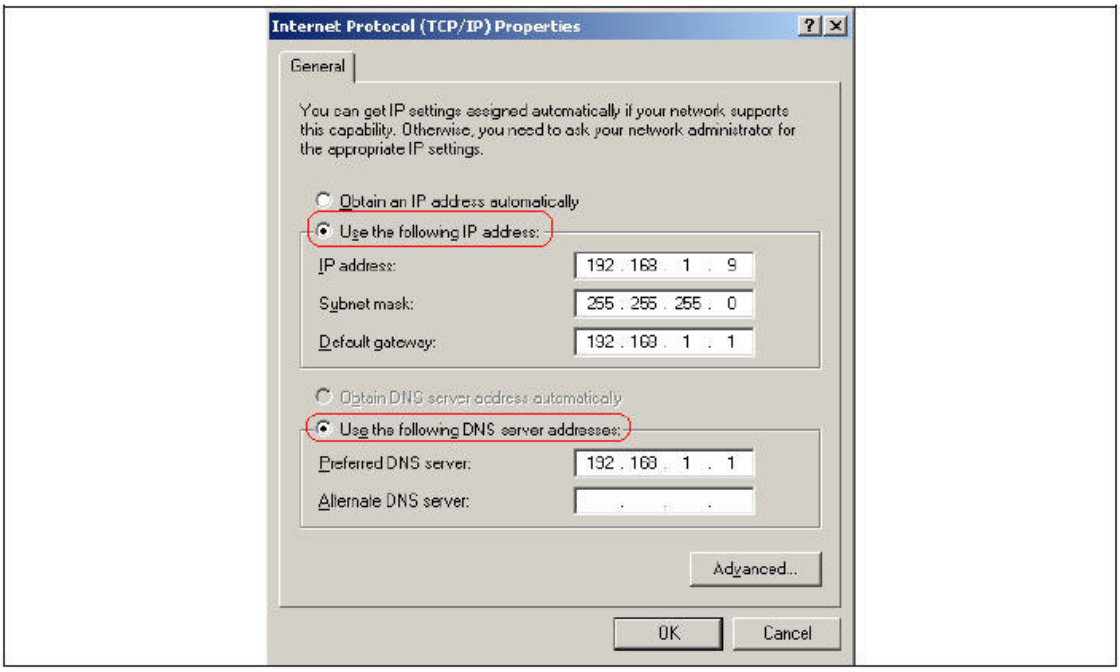
IP address: fill in IP address 192.168.1.x(x is a number between 2 to 254)

Subnet mask: Default value is 255.255.255.0.

Default gateway: Default value is 192.168.1.1.

Preferred DNS server: Fill in preferred DNS server IP address.

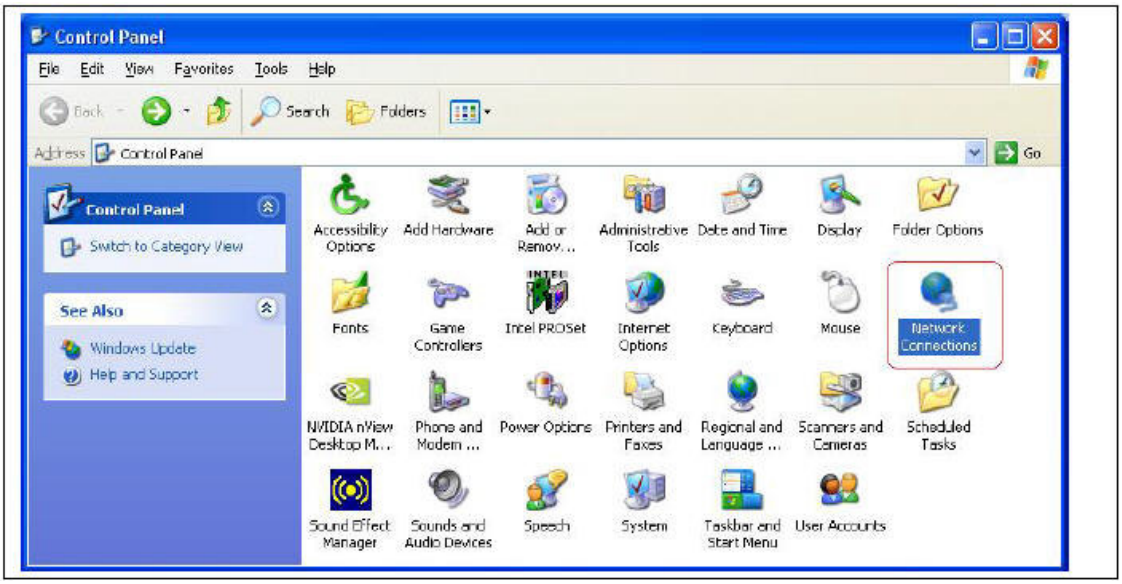
Alternate DNS server: Fill in alternate DNS server IP address


Internet Protocol (TCP/IP) Properties
General
You can get IP settings assigned automatically if your network supports this capability. Otherwise, you need to ask your network administrator for the appropriate IP settings.
Obtain an IP address automatically
Use the following IP address:
IP address: 192 . 168 . 1 . 9
Subnet mask: 255 . 255 . 255 . 0
Default gateway: 192 . 168 . 1 . 1
Obtain DNS server address automatically
Use the following DNS server addresses:
Preferred DNS server: 192 . 168 . 1 . 1
Alternate DNS server:
Advanced...
OK
Cancel

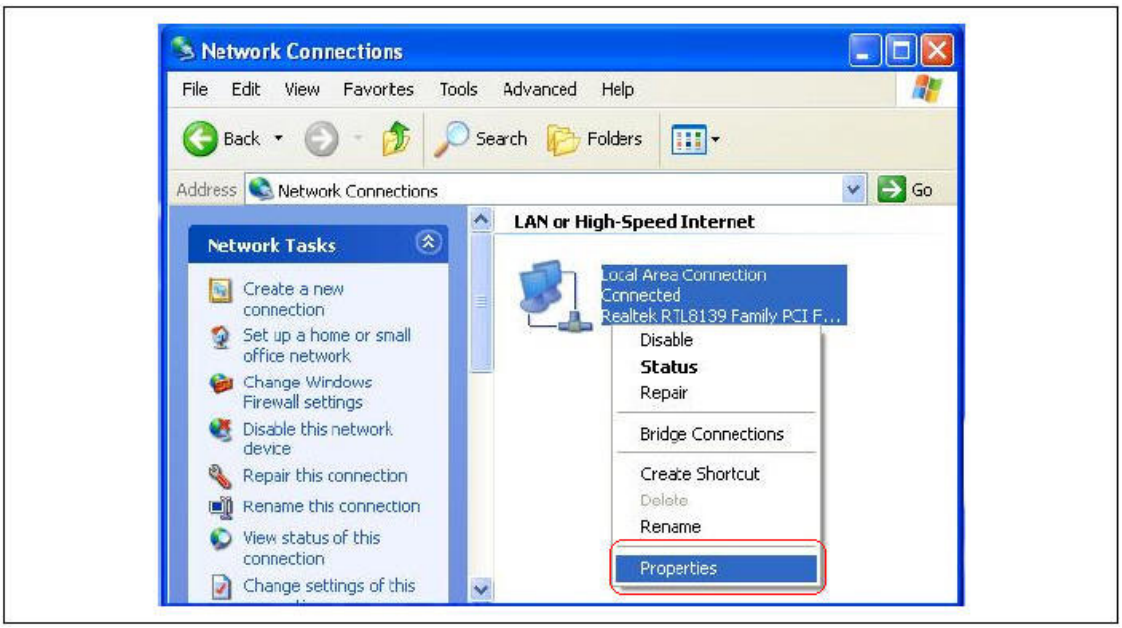
<For Windows XP>

Step 1: Click Start then select Control Panel

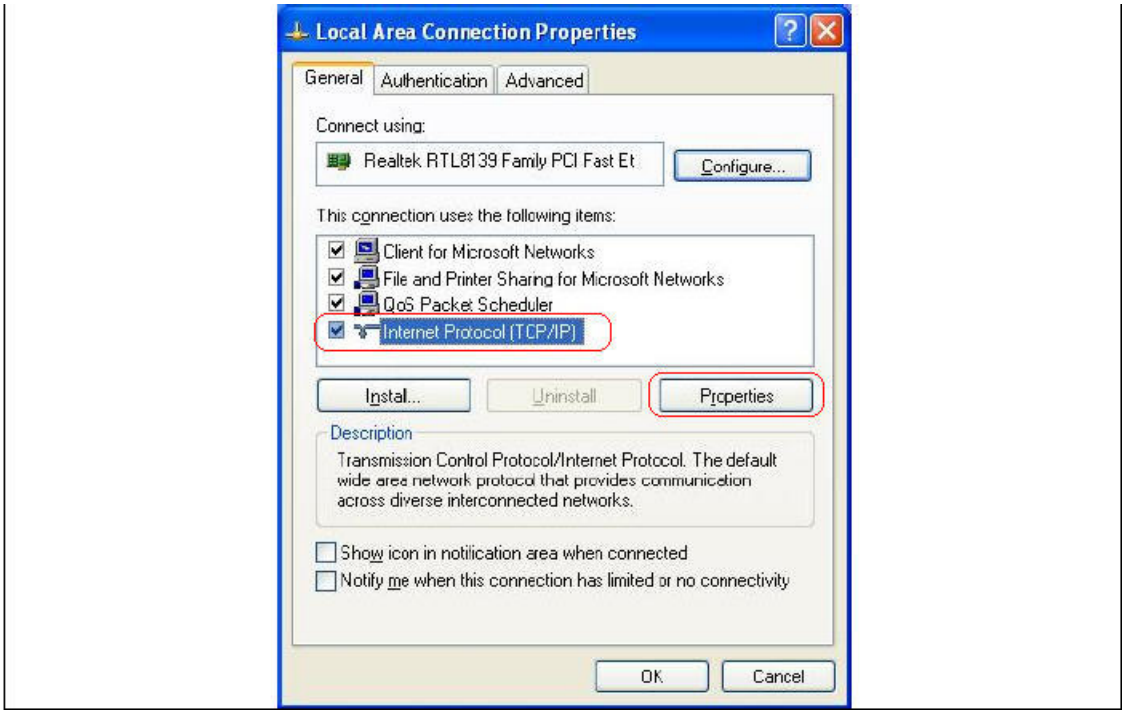
Step 2: Double-click Network Connections icon



Step 3: Right-click Local Area Connection(local network your ADSL hooked up with) and select Properties:

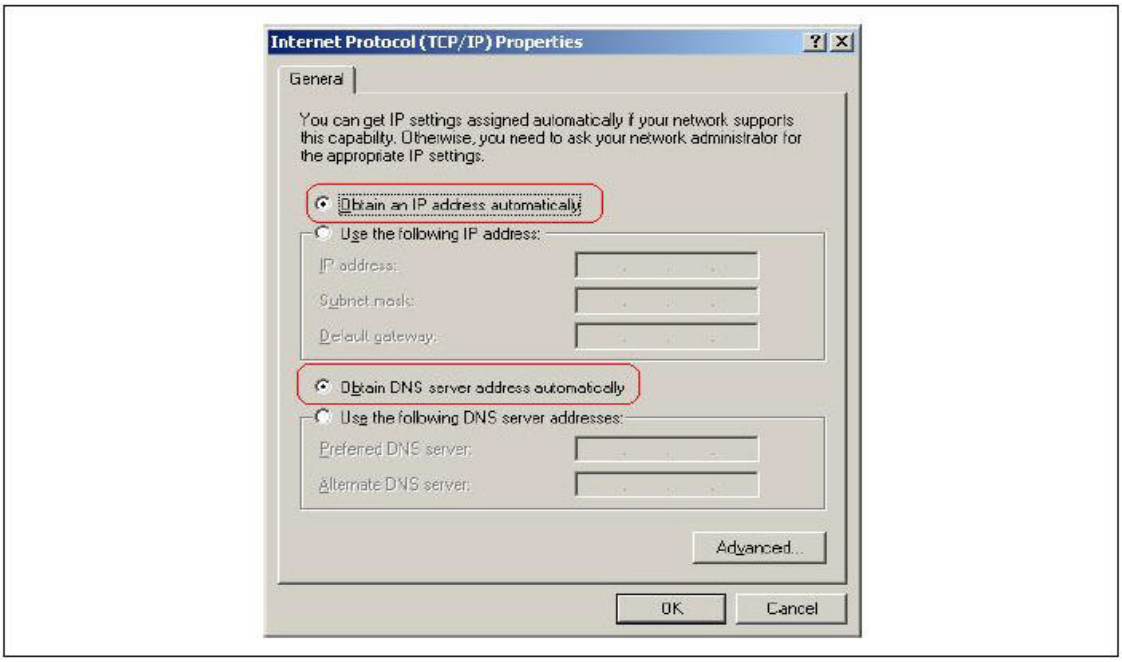


Step 4: Select Internet Protocol(TCP/IP) then click Properties:


Local Area Connection Properties
General Authentication Advanced
Connect using:
Realtek RTL8139 Family PCI Fast Et
Configure...
This connection uses the following items:
Client for Microsoft Networks
File and Printer Sharing for Microsoft Networks
QoS Packet Scheduler
Internet Protocol (TCP/IP)
Install...
Uninstall
Properties
Description
Transmission Control Protocol/Internet Protocol. The default wide area network protocol that provides communication across diverse interconnected networks.
Show icon in notification area when connected
Notify me when this connection has limited or no connectivity
OK
Cancel

Configure IP address Automatically:

Step 5: Select Obtain an IP address automatically and Obtain DNS server address automatically.Click **OK** to finish the configuration


Internet Protocol (TCP/IP) Properties
General
You can get IP settings assigned automatically if your network supports this capability. Otherwise, you need to ask your network administrator for the appropriate IP settings.
Obtain an IP address automatically
Use the following IP address:
IP address:
Subnet mask:
Default gateway:
Obtain DNS server address automatically
Use the following DNS server addresses:
Preferred DNS server:
Alternate DNS server:
Advanced...
OK
Cancel

Configure IP Manually:

Step 6: Select Use the following IP address and Use the following DNS server addresses.

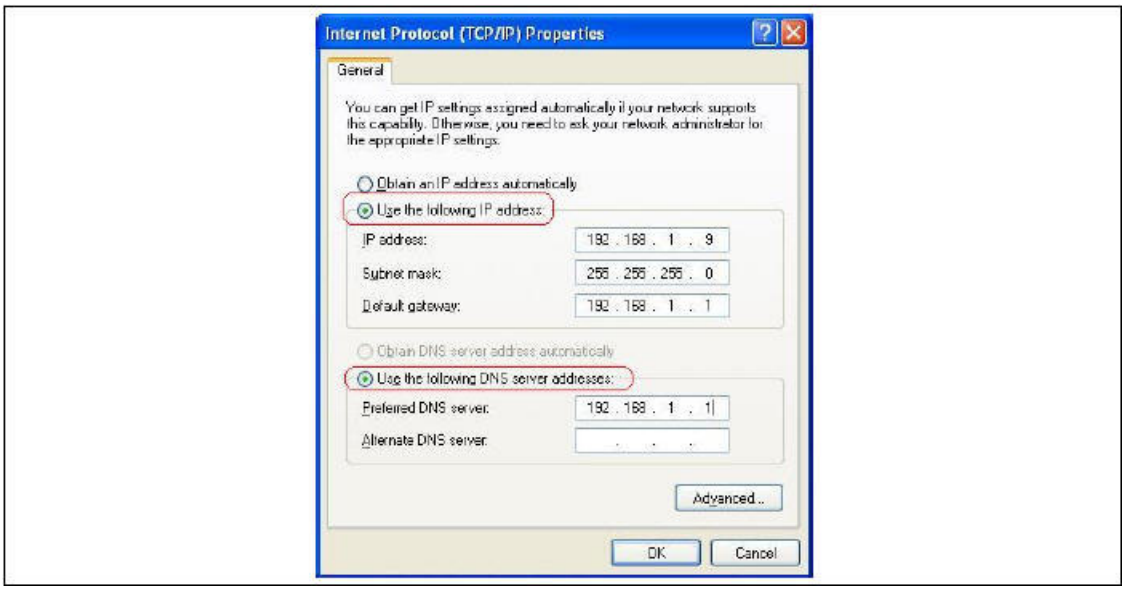
IP address: fill in IP address 192.168.1.x(x is a number between 2 to 254)

Subnet mask: Default value is 255.255.255.0.

Default gateway: Default value is 192.168.1.1.

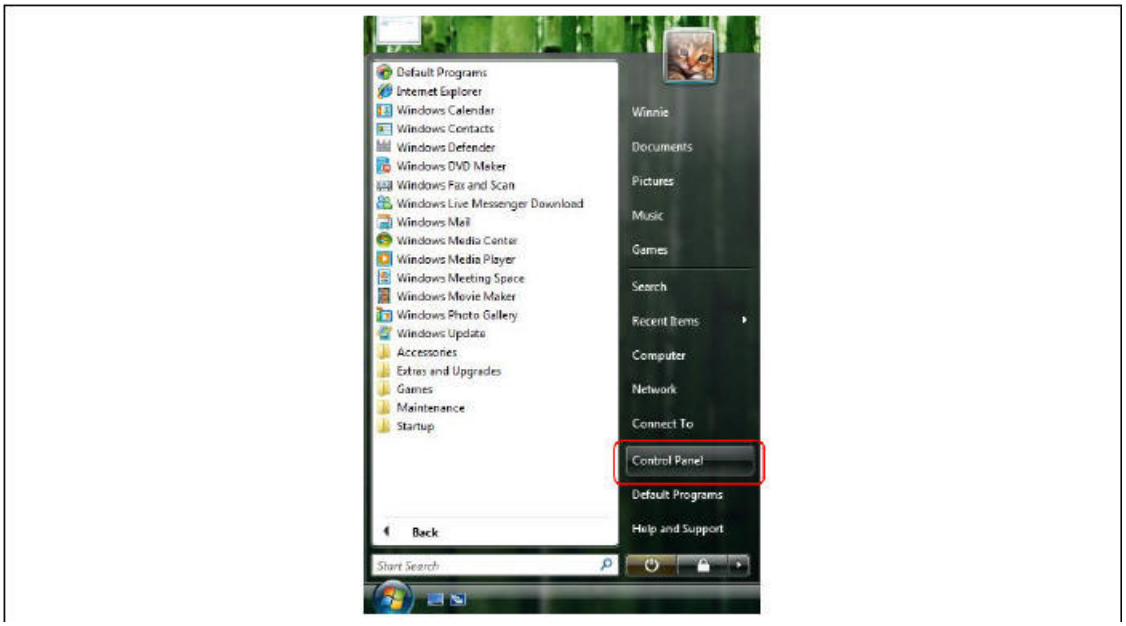
Preferred DNS server: Fill in preferred DNS server IP address.

Alternate DNS server: Fill in alternate DNS server IP address

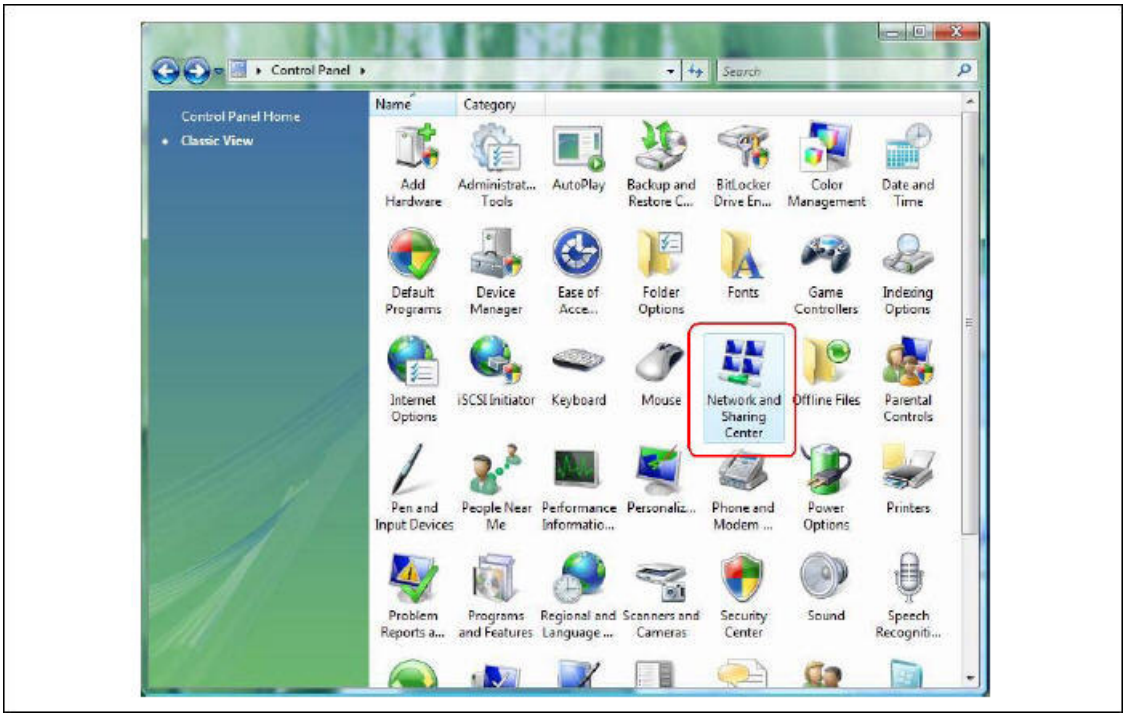

Internet Protocol (TCP/IP) Properties
General
You can get IP settings assigned automatically if your network supports this capability. Otherwise, you need to ask your network administrator for the appropriate IP settings.
Obtain an IP address automatically
Use the following IP address:
IP address: 192 . 168 . 1 . 9
Subnet mask: 255 . 255 . 255 . 0
Default gateway: 192 . 168 . 1 . 1
Obtain DNS server address automatically
Use the following DNS server addresses:
Preferred DNS server: 192 . 168 . 1 . 1
Alternate DNS server:
Advanced...
OK
Cancel

<For Windows Vista>

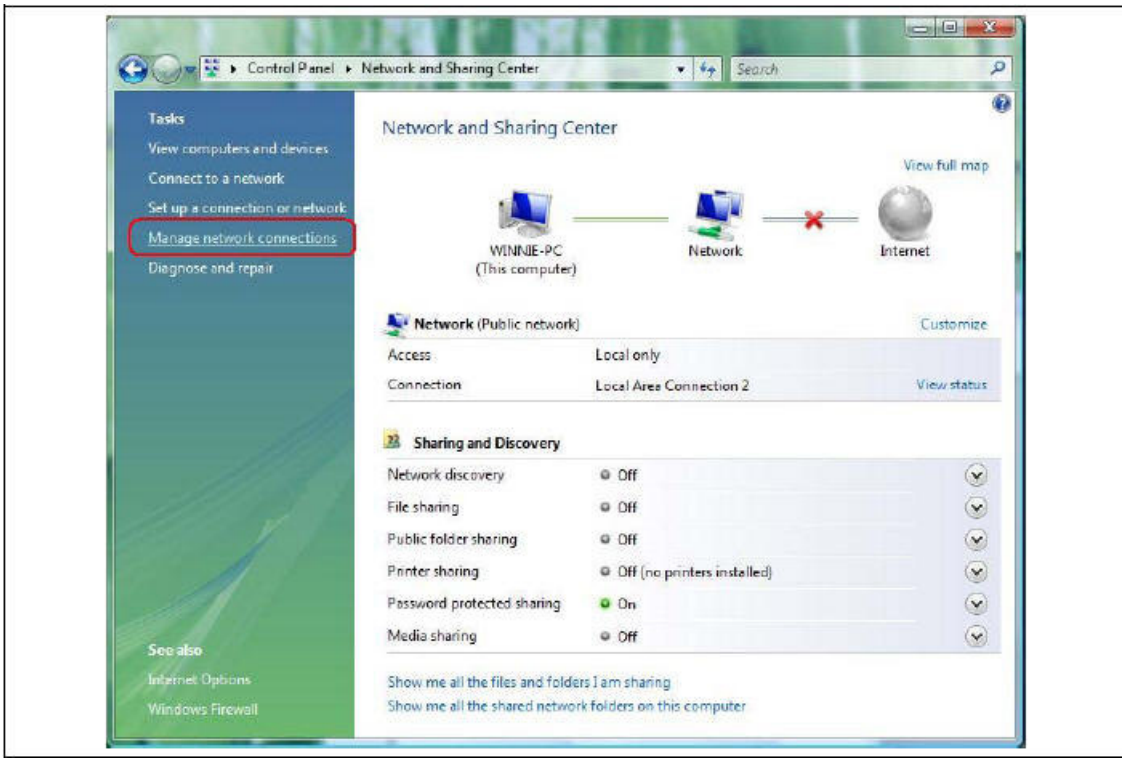
Step 1: Click Start then select Control Panel(in the Classic View)



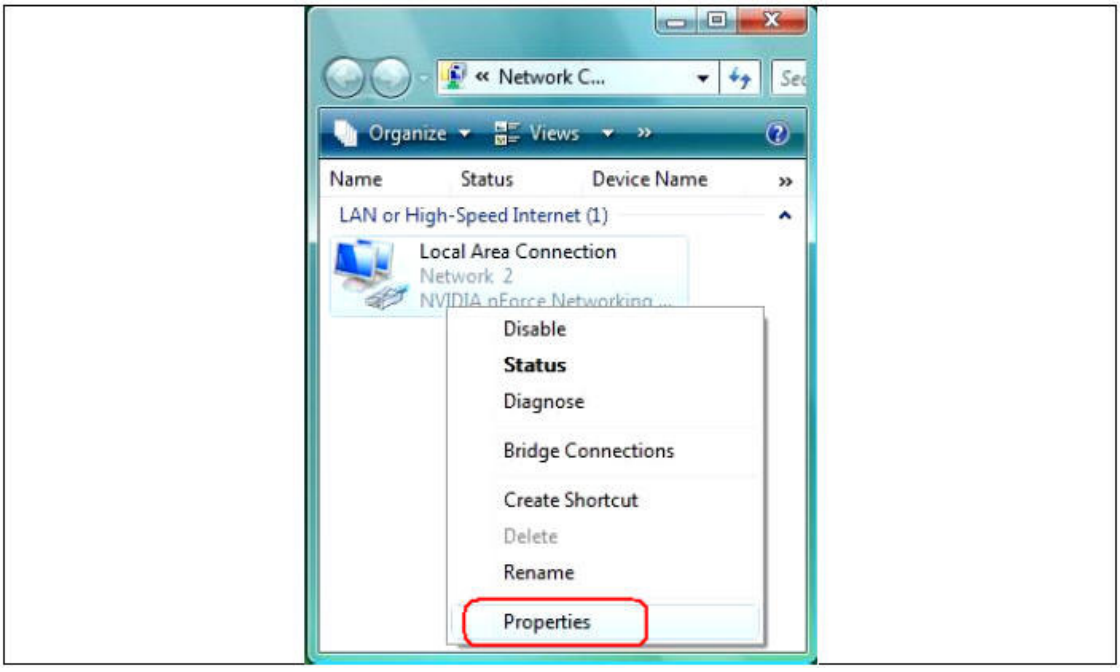
Step 2: Double-click Network and Sharing Center icon



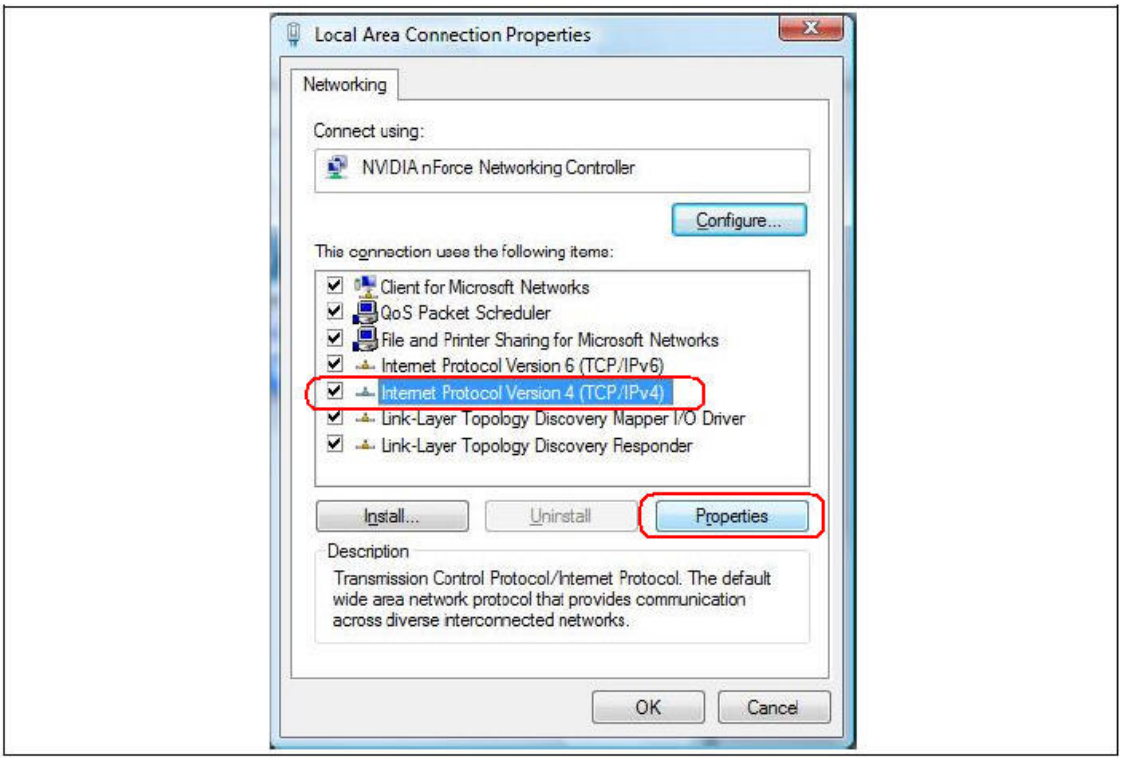
Step 3: Select "Manage Network Connections"



Step 4: Right-click Local Area Connection(local network your ADSL hooked up with) and select Properties.

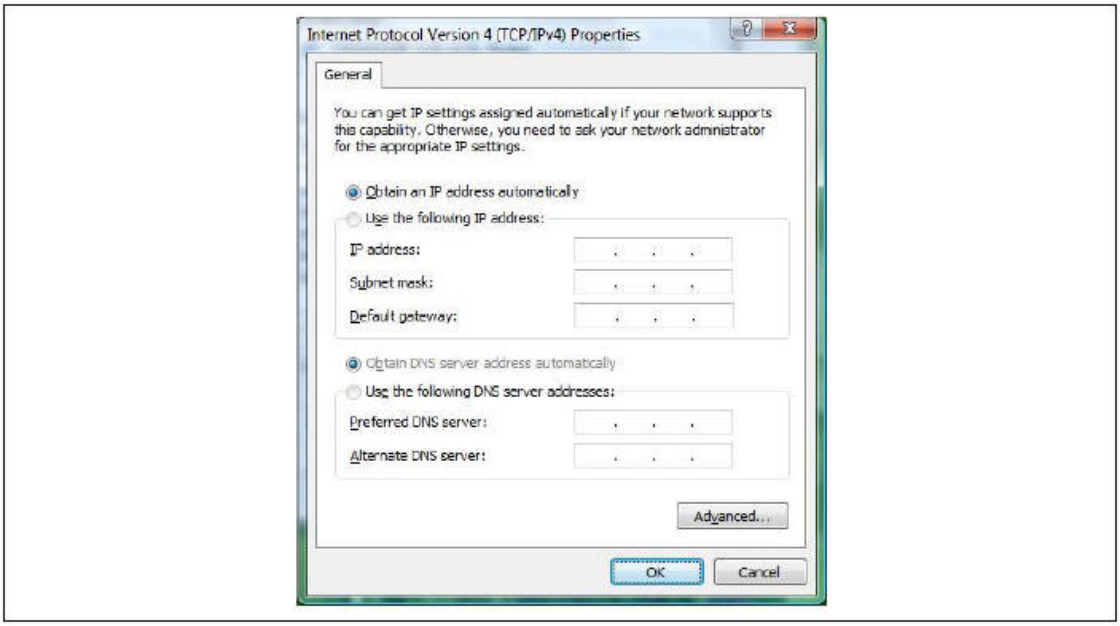


Step 5: Select internet Protocol(TCP/IP) then click Properties:



Configure IP address Automatically:

Step 6: Select Obtain an IP address automatically and Obtain DNS server address automatically. Click **OK** to finish the configuration


Internet Protocol Version 4 (TCP/IPv4) Properties
General
You can get IP settings assigned automatically if your network supports this capability. Otherwise, you need to ask your network administrator for the appropriate IP settings.
Obtain an IP address automatically
Use the following IP address:
IP address:
Subnet mask:
Default gateway:
Obtain DNS server address automatically
Use the following DNS server addresses:
Preferred DNS server:
Alternate DNS server:
Advanced...
OK
Cancel

Configure IP Address Manually:

Step 7: Select Use the following IP address and Use the following DNS server addresses.

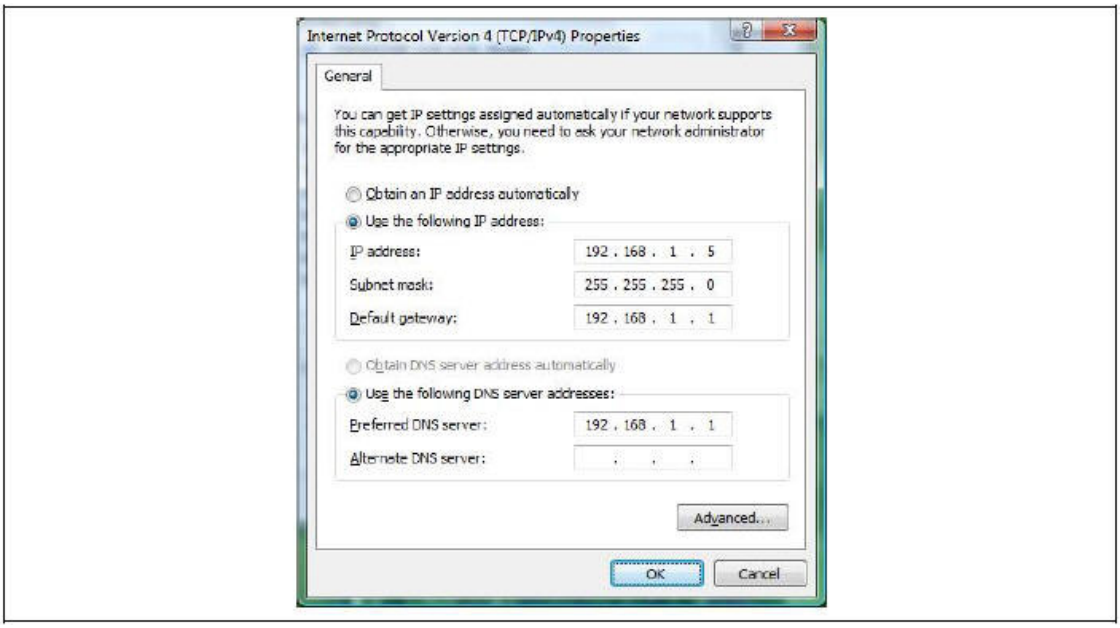
IP address: fill in IP address 192.168.1.x(x is a number between 2 to 254)

Subnet mask: Default value is 255.255.255.0.

Default gateway: Default value is 192.168.1.1.

Preferred DNS server: Fill in preferred DNS server IP address.

Alternate DNS server: Fill in alternate DNS server IP address


Internet Protocol Version 4 (TCP/IPv4) Properties
General
You can get IP settings assigned automatically if your network supports this capability. Otherwise, you need to ask your network administrator for the appropriate IP settings.
Obtain an IP address automatically
Use the following IP address:
IP address:
192 . 168 . 1 . 5
Subnet mask:
255 . 255 . 255 . 0
Default gateway:
192 . 168 . 1 . 1
Obtain DNS server address automatically
Use the following DNS server addresses:
Preferred DNS server:
192 . 168 . 1 . 1
Alternate DNS server:
Advanced...
OK
Cancel

4. Configure CAR-854 via HTML

This device supports a Web-based (HTML) GUI to allow users to configure Router setting via Web browser.

4.1 Login

1) Launch the Web browser.
2) Enter the default IP address **http://192.168.1.1**

3) Entry of the username and password will be displayed. Enter the default login **User Name** and **Password**:

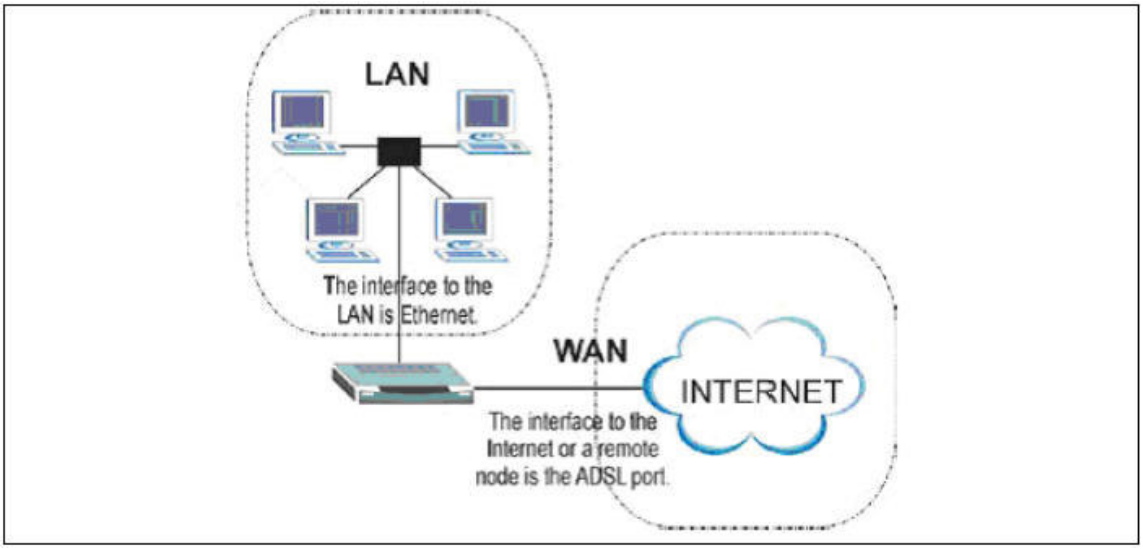
Enter the Windows system and link to http://192.168.1.1.If connection is correctly, you will see the screen like Enter your User Name and Password: admin/admin

5. Interface Setup

The physical connections determine whether the router ports are local area network (LAN) ports or wide area network (WAN) ports. There are two kinds of IP networks.

The local, private kind is the LAN network; the global, public kind is the WAN network. The following illustration shows the relationship between the router and the two different networks.

A LAN is a shared communication system to which many computers are attached. A LAN is generally limited to the immediate area, usually the same building or floor of a building. A WAN is an outside connection to another network or to the internet.



Click an **interface Setup** link to set ATM VC values, ISP Encapsulation, configure multi-connection settings, and LAN configuration.

5.1 Software Configuration

The DSL device is an ADSL2+ router. When you power on the device, the system will boot up and connect to ADSL automatically. The system provides a PVC for bridge test by default. The default configurations for the system are listed below.

LAN IP address: 192.168.1.1, NetMask:255.255.255.0

UART setting: 115200bps, 8 bits, no parity, 1 stop bit, no flow control.

VPI/VCI for ATM: 5/35.

ADSL Line mode: Auto-detect.

User can change settings via WEB browser. The following sections describe the set up procedures. Please set your PC's Ethernet port as follow:

IP address: 192.168.1.XXX

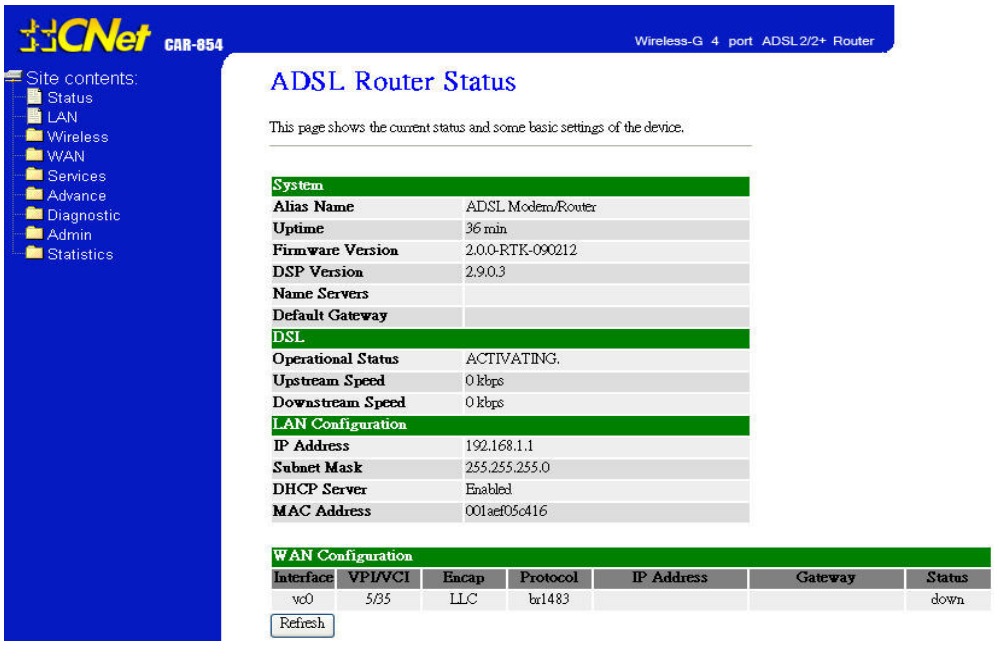
NetMask:255.255.255.0

Access the Web Console:Start your web browser.

Type the Ethernet IP address of the modem/router on the address bar of the browser. Default IP address is 192.168.1.1.

The **Enter Network Password** dialog box appears. Type the user name and password and then click OK.(**default user name : admin; default password : admin**)

Once you have connected to ADSL2+ router. You will see the status page.



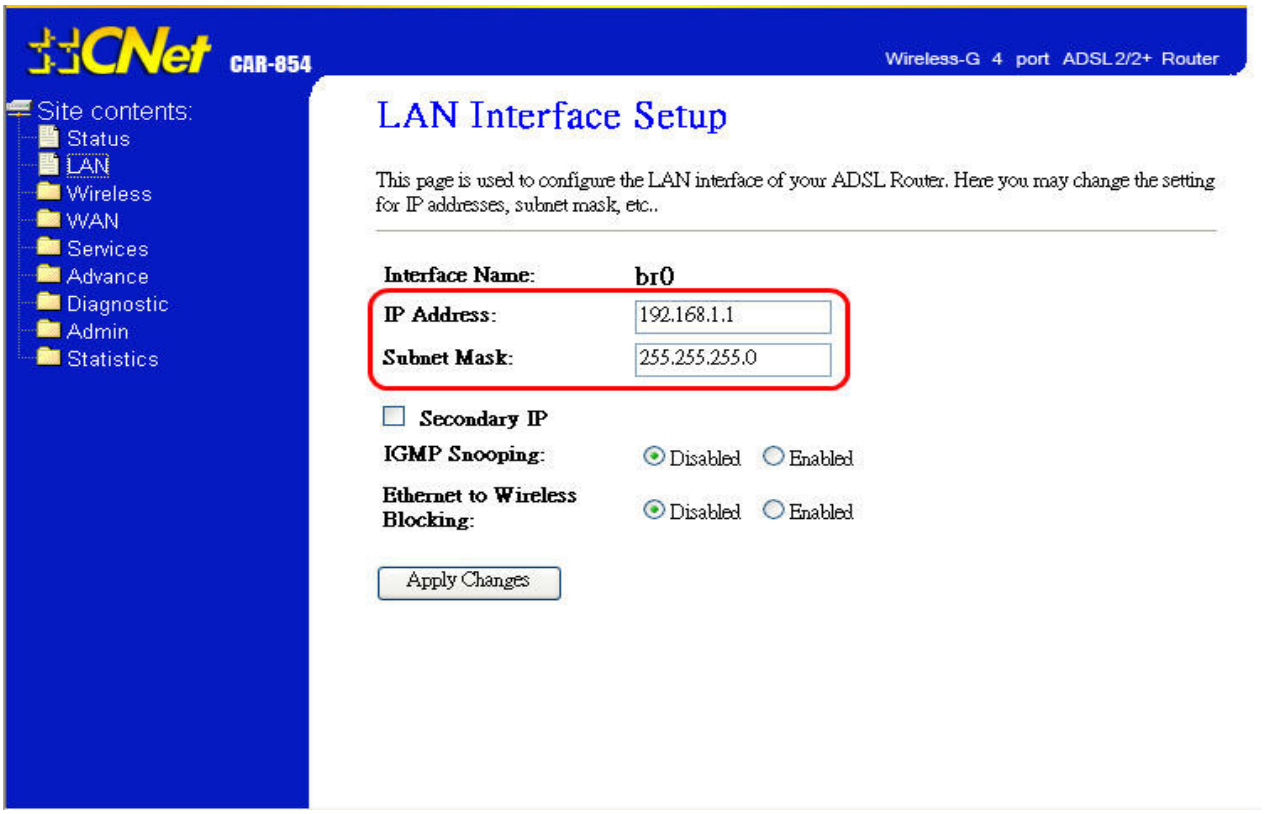
This page displays the ADSL modem/router's current status and settings. This information is read-only except for the PPPoE/PPPoA channel for which user can connect/disconnect the channel on demand. Click the "Refresh" button to update the status.

Connect / Disconnect

The two buttons take effect only when PVC is configured as PPPoE/PPPoA mode. Click Connect/Disconnect button to connect/disconnect the PPP dial up link.

5.2 LAN Configuration

This page shows the current setting of LAN interface. You can set IP address and subnet mask for LAN interface in this page.



Fields in this page:

Field	Description
IP Address	The IP address your LAN hosts use to identify the device's LAN port.
Subnet Mask	LAN subnet mask.

Function buttons in this page:

Apply Changes

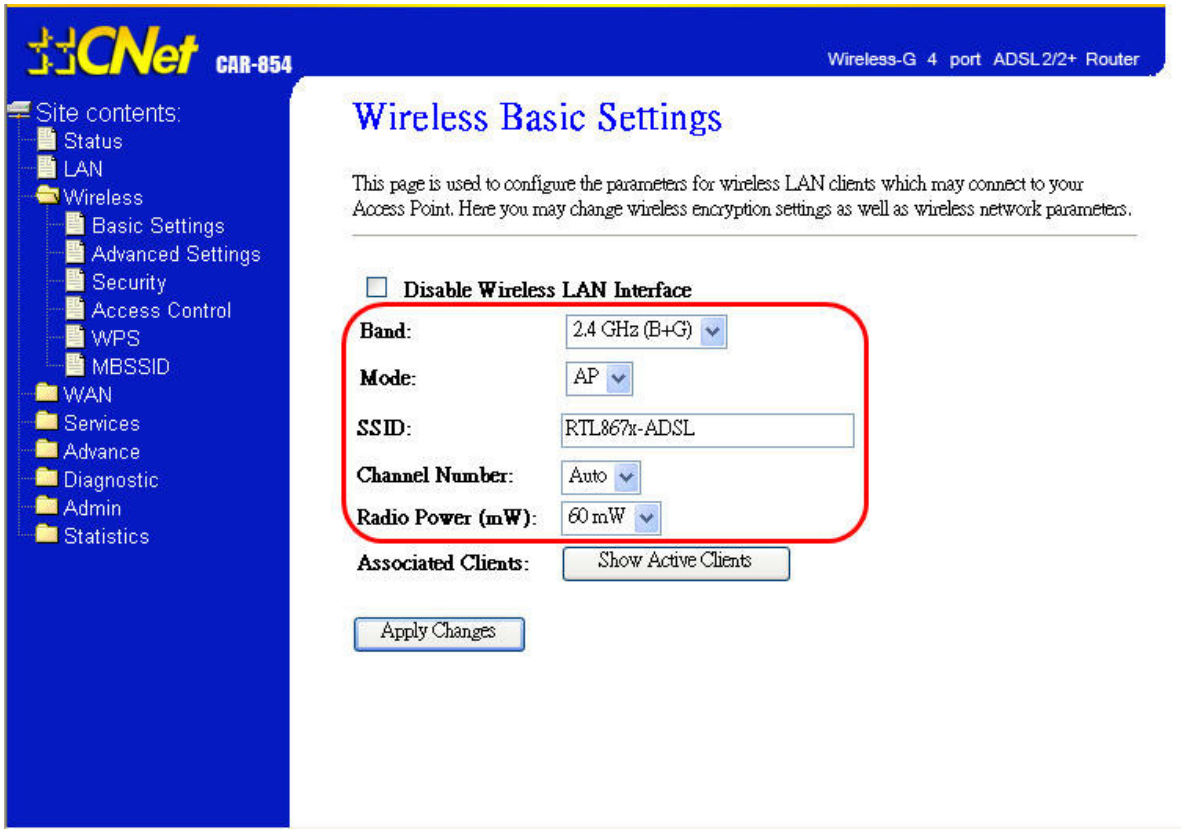
Click to save the setting to the configuration. New parameters will take effect after save into flash memory and reboot the system. See section "Admin" for save details.

5.3 Wireless Configuration

This section provides the wireless network settings for your WLAN interface. The wireless interface enables the wireless AP function for ADSL modem.

5.3.1 Basic Setting

This page contains all of the wireless basic settings. Most users will be able to configure the wireless portion and get it working properly using the setting on this screen.



Field	Description
Disable Wireless LAN Interface	Check it to disable the wireless function for ADSL modem.
Band	Select the appropriate band from the list provided to correspond with your network setting.
Mode	The selections are: AP or AP+WDS.
SSID	The Service Set Identifier (SSID) or network name. It is case sensitive and must not exceed 32 characters, which may be any keyboard character. The mobile wireless stations shall select the same SSID to be able to communicate with your ADSL modem (or AP).

Fields in this page:

Channel Number	Select the appropriate channel from the list provided to correspond with your network settings. You shall assign a different channel for each AP to avoid signal interference.
Radio Power (mW)	The maximum output power: 15mW, 30mW or 60mW.

Function buttons in this page:

Associated Clients

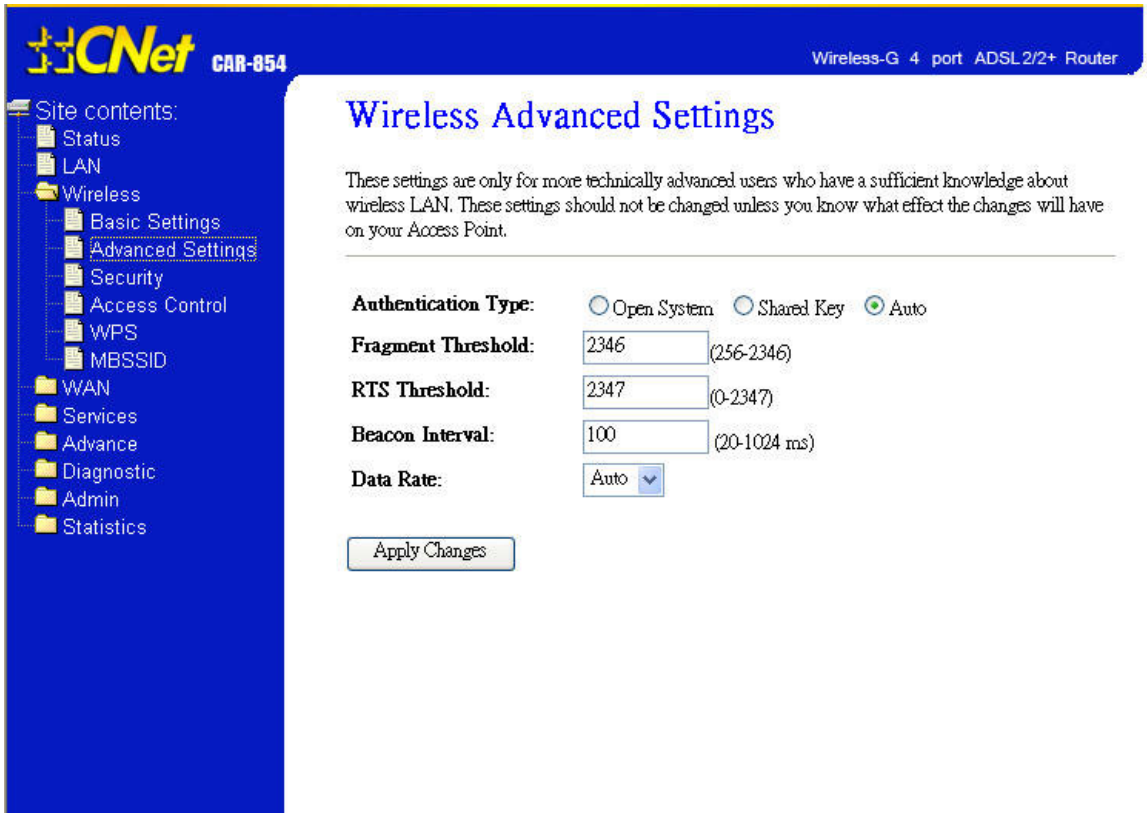
Click it will show the clients currently associated with the ADSL modem.

Apply Changes

Change the settings. New parameters will take effect after save into flash memory and reboot the system. See section "Admin" for save details.

5.3.2 Advanced Settings

This page allows advanced users who have sufficient knowledge of wireless LAN. These setting shall not be changed unless you know exactly what will happen for the changes you made on your DSL device.



Fields in this page:

Field	Description
Authentication Type	Open **System:** Open System authentication is not required to be successful while a client may decline to authenticate with any particular other client. **Shared Key:** Shared Key is only available if the WEP option is implemented. Shared Key authentication supports authentication of clients as either a member of those who know a shared secret key or a member of those who do not. IEEE 802.11 Shared Key authentication accomplishes this without the need to transmit the secret key in clear. Requiring the use of the WEP privacy mechanism. **Auto:** Auto is the default authentication algorithm. It will change its authentication type automatically to fulfill client's requirement.
Fragment Threshold	his value should remain at its default setting of 2346. It specifies the maximum size for a packet before data is fragmented into multiple packets. If you experience a high packet error, you may slightly increases the "Fragment Threshold" value within the value range of 256 2346. Setting this value too low may result in poor network performance. Only minor modifications of this value are recommended.
RTS Threshold	This value should remain at its default setting of 2347. Should you encounter inconsistent data flow, only minor modifications are recommended. If a network packet is smaller than the preset "RTS threshold" size, the RTS/CTS mechanism will not be enabled. The ADSL modem (or AP) sends Request to Send (RTS) frames to a particular receiving station and negotiates the sending of a data frame. After receiving an RT the wireless station responds with a Clear to Send (CTS) frame to acknowledge the right to begin transmission.
Beacon Interval	The Beacon Interval value indicates the frequency interval of the beacon. Enter a value between 20 and 1024. A beacon is a packet broadcast by the ADSL modem (or AP) to synchronize the wireless network. The default is 100.
Data Rate	The rate of data transmission should be set depending on the speed of your wireless network. You should select from a range of transmission speeds, or you can select *Auto* to have the ADSL modem (or AP) automatically use the fastest possible data rate and enable the Auto-Fallback feature. Auto-Fallback will negotiate the best possible connection speed between the AP and a wireless client. The default setting is *Auto*.

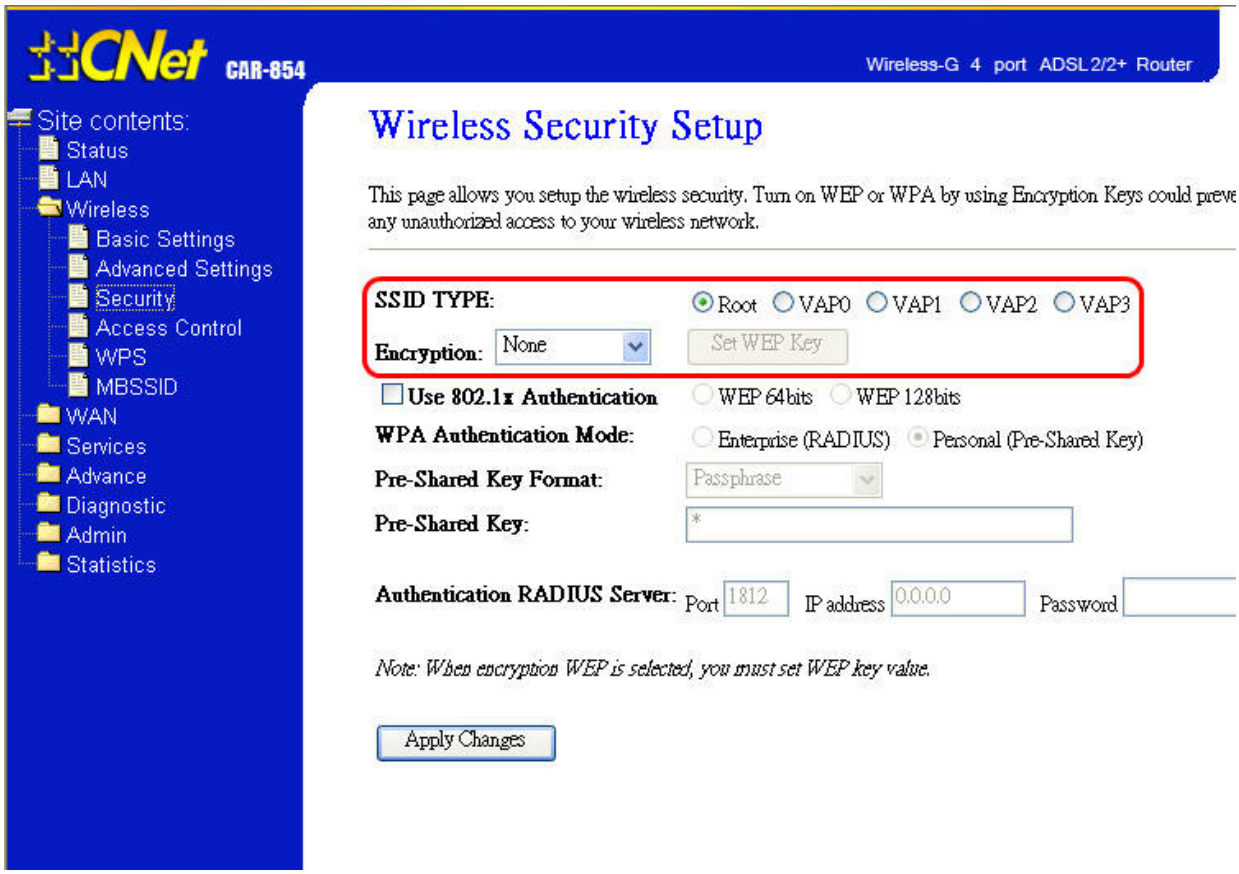
Function buttons in this page:

Apply Changes

Change the settings. New parameters will take effect after save into flash memory and reboot the system. See section "Admin" for save details.

5.3.3 Security

This screen allows you to setup the wireless security. Turn on WEP or WPA by using encryption keys could prevent any unauthorized access to your WLAN.



Fields in this page:

Field	Description
Encryption	There are 4 types of security to selected. To secure your WLAN, it's Strongly recommended to enable this feature. WEP: Make sure that all wireless devices on your network are using The same encryption level and key. Click Set WEP Key button to set the encryption key. **WPA(TKIP)**:WPA uses Temporal Key Integrity Protocol(TKIP) for Data encryption. TKIP utilized a stronger encryption method and incorporates Message Integrity Code(MIC) to provide protection against hackers. **WPA2(AES)**:WPA2,also known as 802.11i, uses Advanced Encryption Standard(AES) for data encryption. AES utilized a symmetric 128-bit block data encryption. **WAP2 Mixed**:The AP supports WPA(TKIP) and WPA2(AES) for data enctyption. The actual selection of the encryption methods will depend on the clients.
Use 802.1x Authentication	Check it to enable 802.1x authentication. This option is selectable only when the "Encryption" is choose to either None or WEP. If the "Encryption" is WEP, you need to further select the WEP key length to be either WEP 64bits or WEP 128bits.

WPA Authentication Mode	There are 2 types of authentication mode for WPA. **WPA-RADIUS:** WPA RADIUS uses an external RADIUS server to perform user authentication. To use WPA RADIUS, enter the IP address of the RADIUS server, the RADIUS port (default is 1812) and the shared secret from the RADIUS server. Please refer to "Authentication RADIUS Server" setting below for RADIUS setting. The WPA algorithm is selected between TKIP and AES, please refer to "WPA cipher Suite" below. **Pre-**Shared **Key:** Pre-Shared Key authentication is based on a shared secret that is known only by the parties involved. To use WPA Pre-Shared Key, select key format and enter a password i the "Pre-Shared Key Format" and "Pre-Shared Key" setting respectively. Please refer to "Pre-Shared Key Format" and "Pre-Shared Key" setting below.
Pre-Shared Key Format	PassPhrase**:** Select this to enter the Pre-Shared Key secret as user-friendly textual secret. **Hex (64 characters):** Select this to enter the Pre-Shared Key secret as hexadecimal secret.
Pre-Shared Key	Specify the shared secret used by this Pre-Shared Key. If the "Pre-Shared Key Format" is specified as *PassPhrase*, then it indicates a passphrase of 8 to 63 bytes long; or if the "Pre-Shared Key Format" is specified as *PassPhrase*, then it indicates a 64-hexadecimal number.
Authentication RADIUS Server	If the *WPA-RADIUS* is selected at "WPA Authentication Mode", the port (default is 1812), IP address and password of external RADIUS server are specified here.

Function buttons in this page:

Apply Changes

Change the settings. New parameters will take effect after save into flash memory and reboot the system. See section "Admin" for save details.

5.3.4 Access Control

This page allows administrator to have access control by enter MAC address of client stations. When Enable this function, MAC address can be added into access control list and only those clients whose wireless MAC address are in the access control list will be able to connect to your DSL device (or AP).

Fields in this page:

Field	Description
Wireless Access Control Mode	The Selections are: **Disable** Disable the wireless ACL feature. **Allow Listed** When this option is selected, no wireless clients except those whose MAC addresses are in the current access control list will be able to connect (to this device). **Deny Listed** When this option is selected, all wireless clients except those whose MAC addresses are in the current access control list will be able to connect (to this device).
MAC Address	Enter client MAC address and press “Apply Changes” button to add client MAC address into current access control list.

Function buttons for the setting block:

Apply Changes

Click to add this entry into the **Current Access Control List**.

The **Current Access Control List** lists the client MAC addresses. Any wireless client with its MAC address listed in this access control list will be able to connect to the device. You can select the entries at the Select column and apply to the following function buttons. Function buttons for the **Current Access Control List**:

Delete Selected

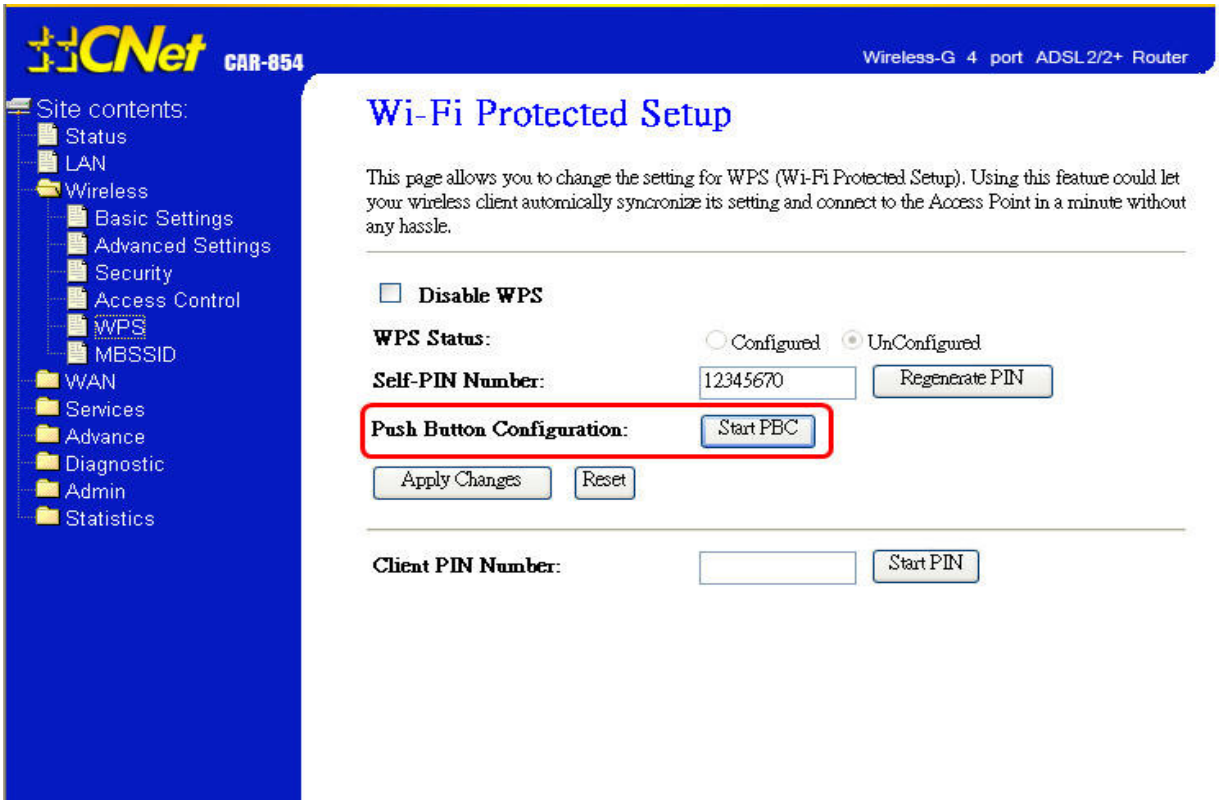
Delete the selected entries from the list.

Delete All

Flush the list.

5.3.5 WPS

WiFi Protect Setup (WPS) is a push –button or pin to simplify to secure network set-up.



Fields in this page:

Field	Description
Disable WPS	Check to disable the WPS function.
Self-PIN Number	PIN number.

Apply Changes

Click to add this entry into the **Current WPS List**.

Reset

Discard your changes and reload all settings

5.3.6 MBSSID

This screen allows you to do the wireless multiple BSSID setup

Apply Changes

Click to add this entry into the **Current MBSSID List**.

Reset

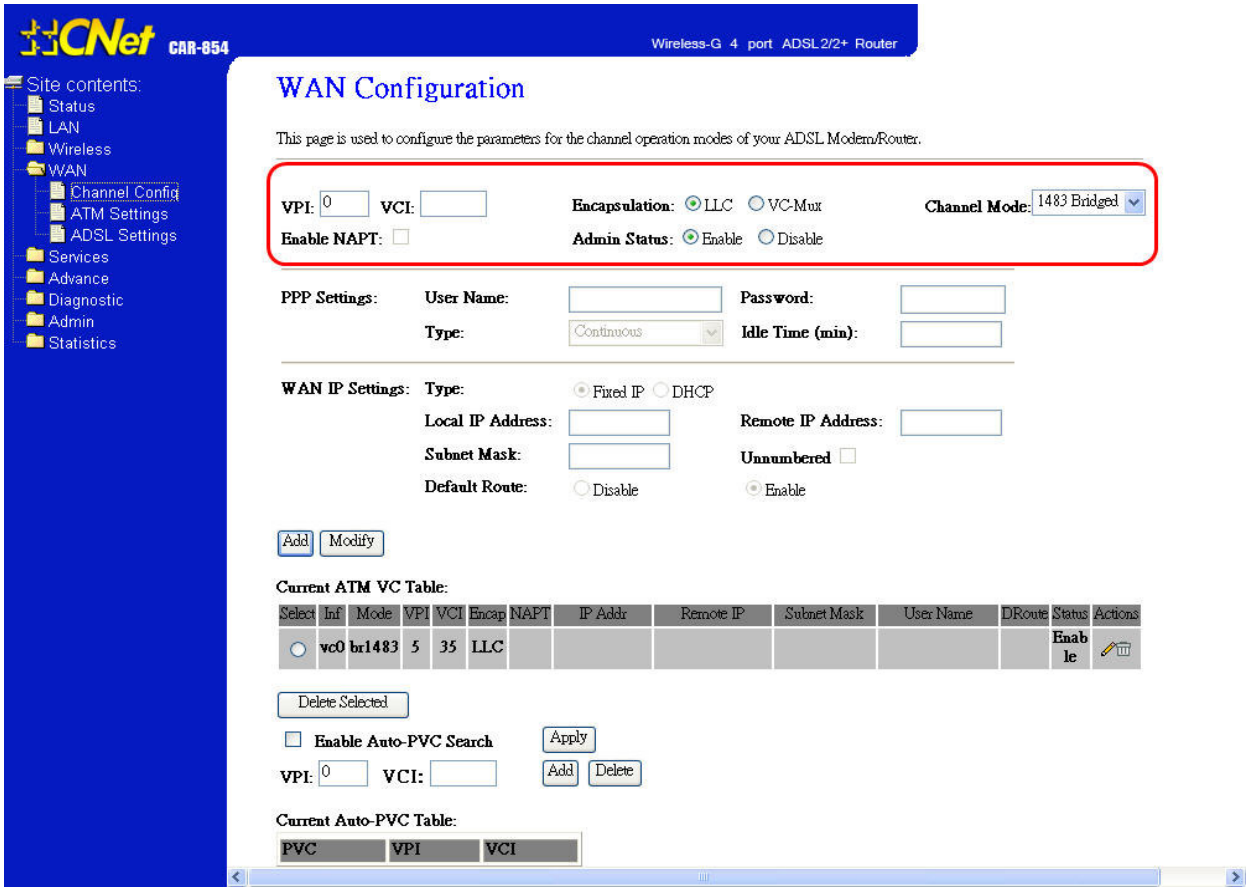
Discard your changes and reload all settings

5.4 WAN Configuration

There are three sub-menu for WAN configuration:
[Channel Config], [ATM Settings], and [ADSL Settings].

5.4.1 Channel Configuration

ADSL modem/router comes with 8 ATM Permanent Virtual Channels (PVCs) at the most. There are mainly two operations for each of the PVC channels: add and modify. And there are several channel modes to be selected for each PVC channel. For each of the channel modes, please refer to the section – **Channel Mode Configuration** for details.



Function buttons in this page:

Add

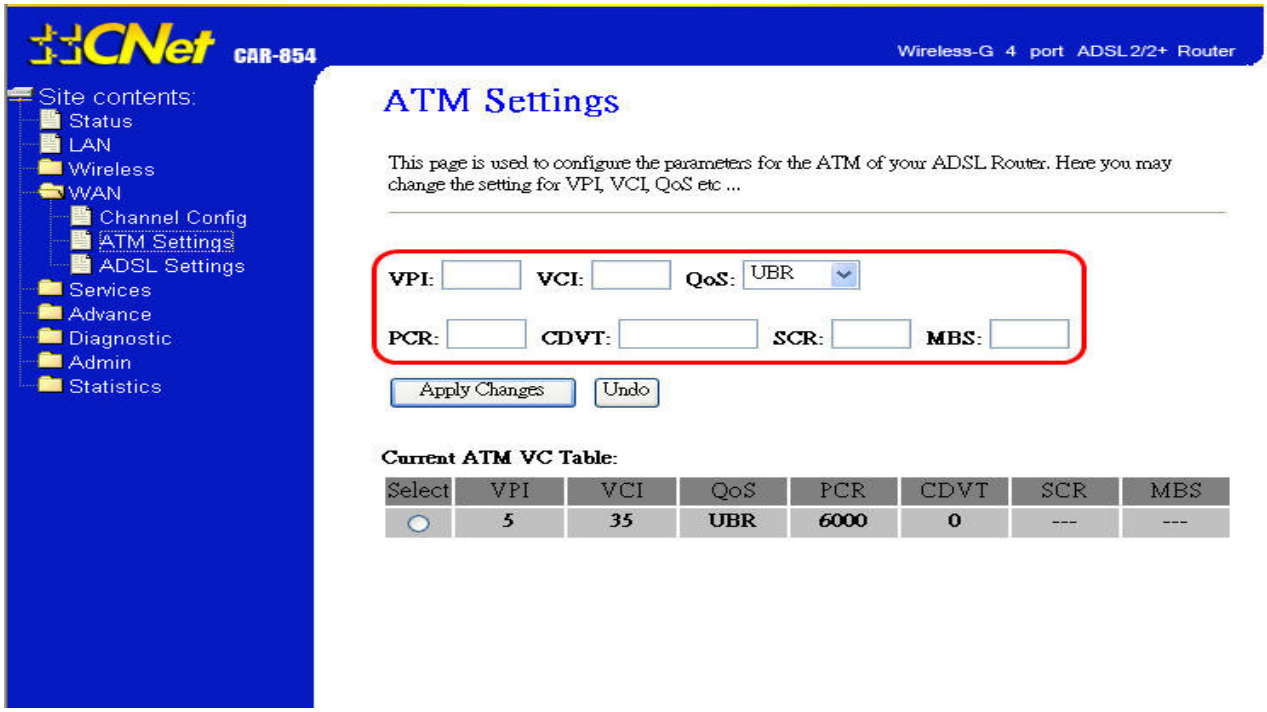
Click **Add** to complete the channel setup and add this PVC channel into configuration.

Modify

Select an existing PVC channel by clicking the radio button at the **Select** column of the **Current ATM VC Table** before we can modify the PVC channel. After selecting a PVC channel, we can modify the channel configuration at this page. Click **Modify**
to complete the channel modification and apply to the configuration.

5.4.2 ATM Setting

The page is for ATM PVC QoS parameters setting. The DSL device supports 4 QoS mode — UBR / CBR / nrt-VBR / rt-VBR.



Field	Description
VPI	Virtual Path Identifier. This is read-only field and is selected on the **Select** column in the Current ATM VC Table.
VCI	Virtual Channel Identifier. This is read-only field and is selected on the **Select** column in the Current ATM VC Table. The VCI, together with VPI, is used to identify the next destination of a cell as it passes through to the ATM switch.
QoS	Quality of Server, a characteristic of data transmission that measures how accurately and how quickly a message or data is transferred from a source host to a destination host over a network. The four QoS options are ,, UBR (Unspecified Bit Rate): When UBR is selected; the SCR and MBS fields are disabled. ,, CBR (Constant Bit Rate): When CBR is selected; the SCR and MBS fields are disabled. ,, nrt-VBR (non-real-time Variable Bit Rate): When nrt-VBR is selected, the SCR and MBS fields are enabled. ,, rt-VBR (real-time Variable Bit Rate): When rt-VBR is selected, the SCR and MBS fields are enabled.
PCR	Peak Cell Rate, measured in cells/sec., is the cell rate which the source may never exceed.
SCR	Sustained Cell Rate, measured in cells/sec., is the average cell rate over the duration of the connection.
MBS	Maximum Burst Size, a traffic parameter that specifies the maximum number of cells that can be transmitted at the peak cell rate.

Function buttons in this page:

Apply Changes

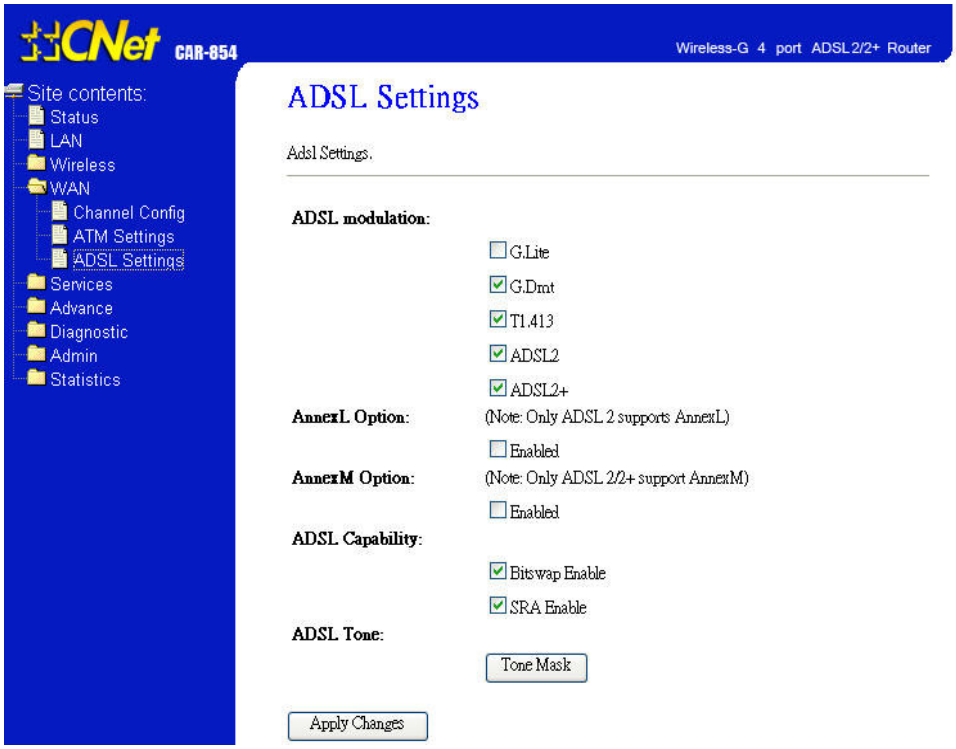
Set new PVC OoS mode for the selected PVC. New parameters will take effect after save into flash memory and reboot the system. See section "Admin" for save details.

Undo

Discard your settings.

5.4.3 ADSL Setting

The ADSL setting page allows you to select any combination of DSL training modes.



Fields in this page:

Field	Description
ADSL modulation	Choose preferred xdsl standard protocols. G.lite : G.992.2 Annex A G.dmt : G.992.1 Annex A T1.413 : T1.413 issue #2 ADSL2 : G.992.3 Annex A ADSL2+ : G.992.5 Annex A
AnnexL Option	Enable/Disable ADSL2/ADSL2+ Annex L capability.
AnnexM Option	Enable/Disable ADSL2/ADSL2+ Annex M capability.
ADSL Capability	"Bitswap Enable" : Enable/Disable bitswap capability. "SRA Enable" : Enable/Disable SRA (seamless rate adaptation) capability.

Function buttons in this page:

Tone Mask

Choose tones to be masked. Masked tones will not carry any data.

Apply Changes

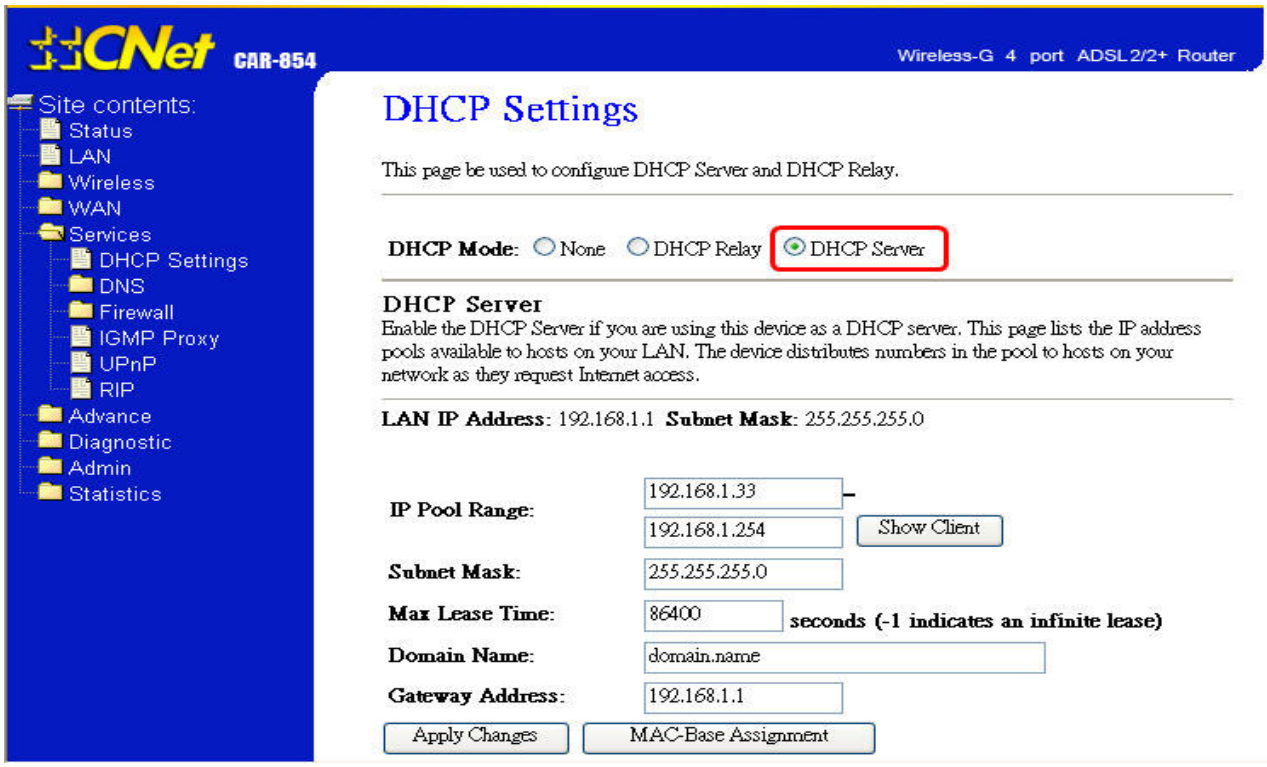
Click to save the setting to the configuration and the modem will be retrained.

5.5 Services Configuration

5.5.1 DHCP Settings

DHCP Mode

You can configure your network and DSL device to use the Dynamic Host Configuration Protocol (DHCP). This page provides DHCP instructions for implementing it on your network by selecting the role of DHCP protocol that this device wants to play. There are two different DHCP roles that this device can act as: DHCP Serve and DHCP Relay. When acting as DHCP server, you can setup the server parameters at the **DHCP Server** page; while acting as DHCP Relay, you can setup the relay at the **DHCP Relay** page.


CNet
CAR-854
Wireless-G 4 port ADSL2/2+ Router
Site contents:
Status
LAN
Wireless
WAN
Services
DHCP Settings
DNS
Firewall
IGMP Proxy
UPnP
RIP
Advance
Diagnostic
Admin
Statistics
DHCP Settings
This page be used to configure DHCP Server and DHCP Relay.
DHCP Mode: None DHCP Relay DHCP Server
DHCP Server
Enable the DHCP Server if you are using this device as a DHCP server. This page lists the IP address pools available to hosts on your LAN. The device distributes numbers in the pool to hosts on your network as they request Internet access.
LAN IP Address: 192.168.1.1 Subnet Mask: 255.255.255.0
IP Pool Range: 192.168.1.33 – 192.168.1.254 Show Client
Subnet Mask: 255.255.255.0
Max Lease Time: 86400 seconds (-1 indicates an infinite lease)
Domain Name: domain.name
Gateway Address: 192.168.1.1
Apply Changes
MAC-Base Assignment

DHCP Server

By default, the device is configured as a DHCP server, with a predefined IP address pool of 192.168.1.64 through 192.168.1.253 (subnet mask 255.255.255.0).

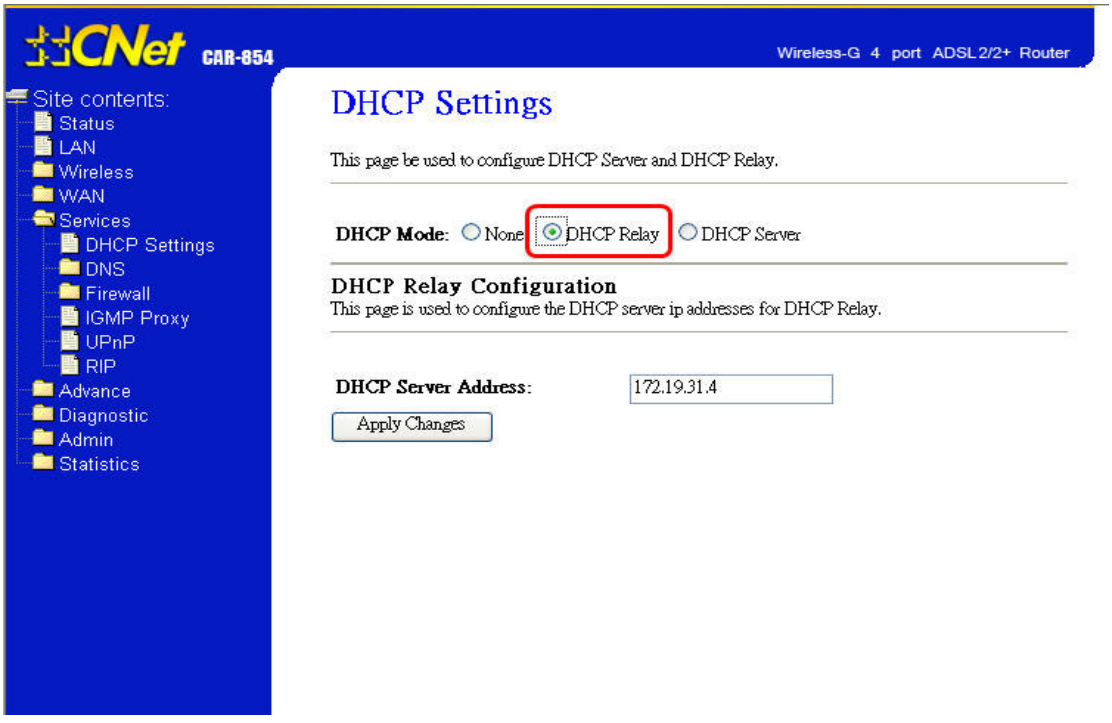
Field	Description
IP Pool Range	Specify the lowest and highest addresses in the pool.
Max Lease Time	The Lease Time is the amount of time that a network user is allowed to maintain a network connection to the device using the current dynamic IP address. At the end of the Lease Time, the lease is either renewed or a new IP is issued by the DHCP server. The amount of time is in units of seconds. The default value is 86400 seconds (1 day). The value –1 stands for the infinite lease.
Domain Name	A user-friendly name that refers to the group of hosts (subnet) that will be assigned addresses from this pool.

Apply Changes

Set new DHCP server configuration. New parameters will take effect after save into flash memory and reboot the system. See section “Admin” for save details.

DHCP Relay Configuration

Some ISPs perform the DHCP server function for their customers’ home/small office network. In this case, you can configure this device to act as a DHCP relay agent. When a host on your network requests Internet access, the device contacts your ISP to obtain the IP configuration, and then forward that information to the host. You should set the DHCP mode after you configure the DHCP relay.



Field	Description
DHCP Server Address	Specify the IP address of your ISP's DHCP server. Requests for IP information from your LAN will be passed to the default gateway, which should route the request appropriately.

Apply Changes

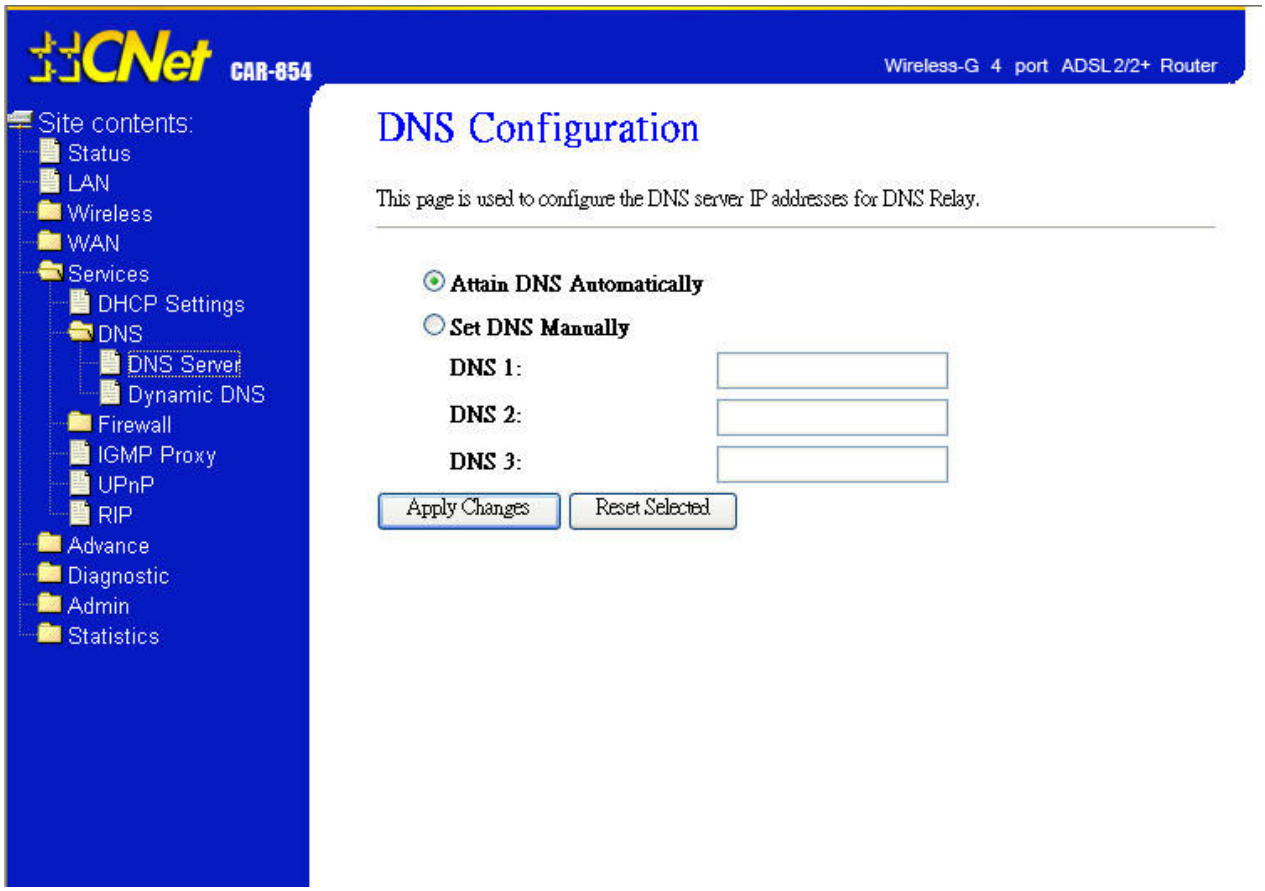
Click to save the setting to the configuration.

5.5.2 DNS Configuration

There are two submenus for the DNS Configuration: [DNS Server] and [Dynamic DNS]

5.5.2.1 DNS Server

This page is used to select the way to obtain the IP addresses of the DNS servers.



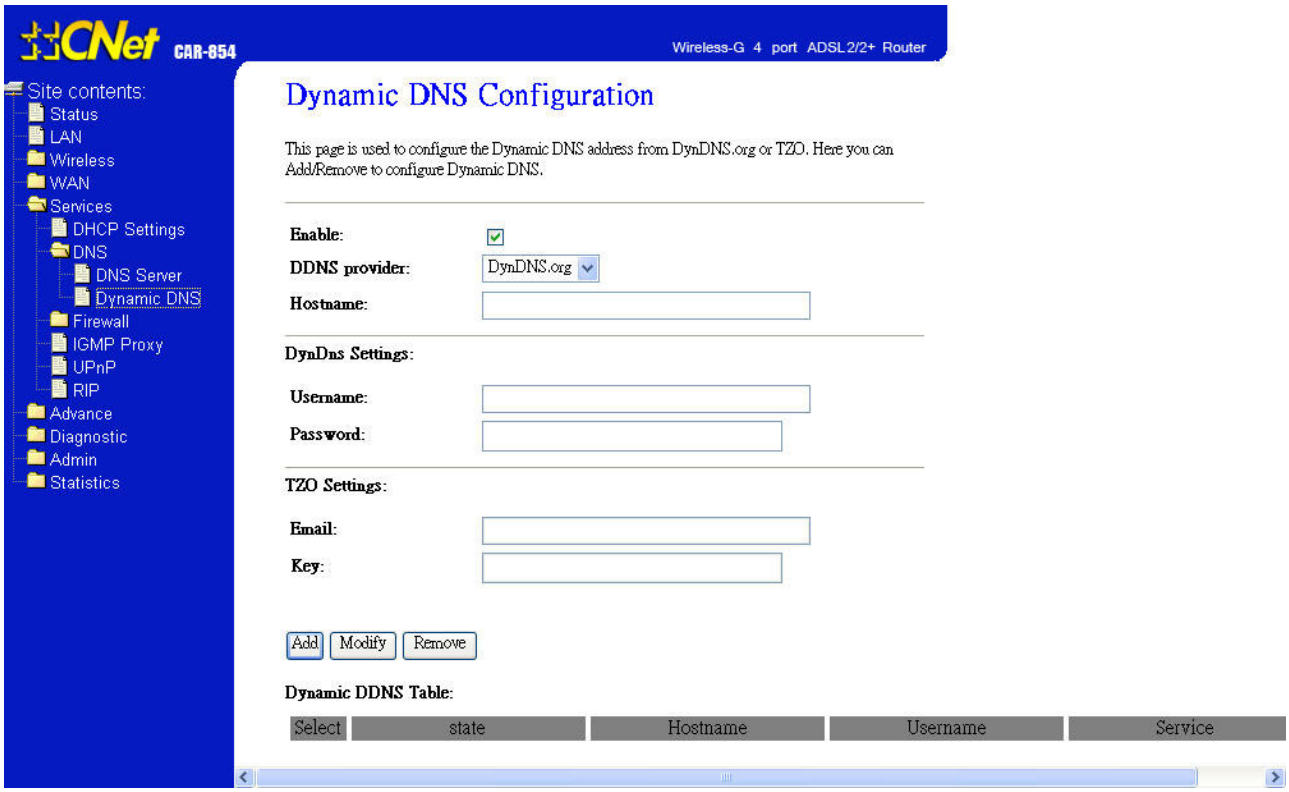
Field	Description
Attain DNS Automatically	Select this item if you want to use the DNS servers obtained by the WAN interface via the auto-configuration mechanism.
Set DNS Manually	Select this item to configure up to three DNS IP addresses.

Apply Changes

Set new DNS relay configuration. New parameters will take effect after save into flash memory and reboot the system. See section "Admin" for save details.

5.5.2.2 Dynamic DNS

Each time your device connects to the Internet, your ISP assigns a different IP address to your device. In order for you or other users to access your device from the WAN-side, you need to manually track the IP that is currently used. The Dynamic DNS features allow you to register your device with a DNS server and access your device each time using the same host name. The **Dynamic DNS** page allows you to enable/disable the Dynamic DNS feature.



On the **Dynamic DNS** page, configure the following fields:

Field	Description
Enable	Check this item to enable this registration account for the DNS server.
DDNS provider	There are two DDNS providers to be selected in order to register your device with: DynDNS and TZO. A charge may occur depends on the service you select.
Hostname	Domain name to be registered with the DDNS server.
Username	User-name assigned by the DDNS service provider.
Password	Password assigned by the DDNS service provider.

Function buttons in this page:

Add

Click Add to add this registration into the configuration.

Remove

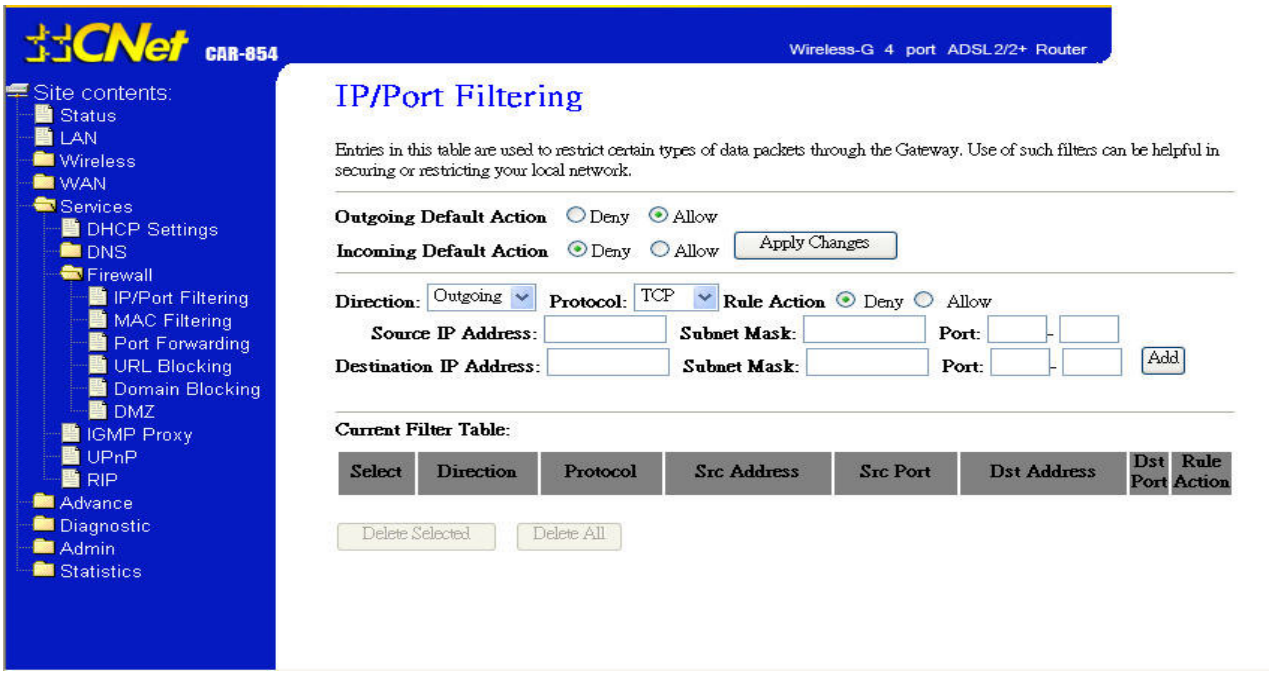
Select an existing DDNS registration by clicking the radio button at the **Select** column of the **Dynamic DNS Table**. Click **Remove** button to remove the selected registration from the configuration.

5.5.3 Firewall Configuration

Firewall contains several features that are used to deny or allow traffic from passing through the device.

5.5.3.1 IP/Port Filtering

The IP/Port filtering feature allows you to deny/allow specific services or applications in the forwarding path.



Field	Description
Outgoing Default Action	Specify the default action on the LAN to WAN forwarding path.
Incoming Default Action	Specify the default action on the WAN to LAN forwarding path.

Click to save the setting of default actions to the configuration. Fields on the second setting block:

Field	Description
Rule Action	Deny or allow traffic when matching this rule.
Direction	Traffic forwarding direction.
Protocol	There are 3 options available: TCP, UDP and ICMP.
Src IP Address	The source IP address assigned to the traffic on which filtering is applied.
Src Subnet Mask	Subnet-mask of the source IP.
Src Port	Starting and ending source port numbers.
Dst IP Address	The destination IP address assigned to the traffic on which filtering is applied.
Dst Subnet Mask	Subnet-mask of the destination IP.
Dst Port	Starting and ending destination port numbers.

Function buttons for this second setting block:

Apply hanges

Click to save the rule entry to the configuration. Function buttons for the **Current Filter Table**:

Delete elected

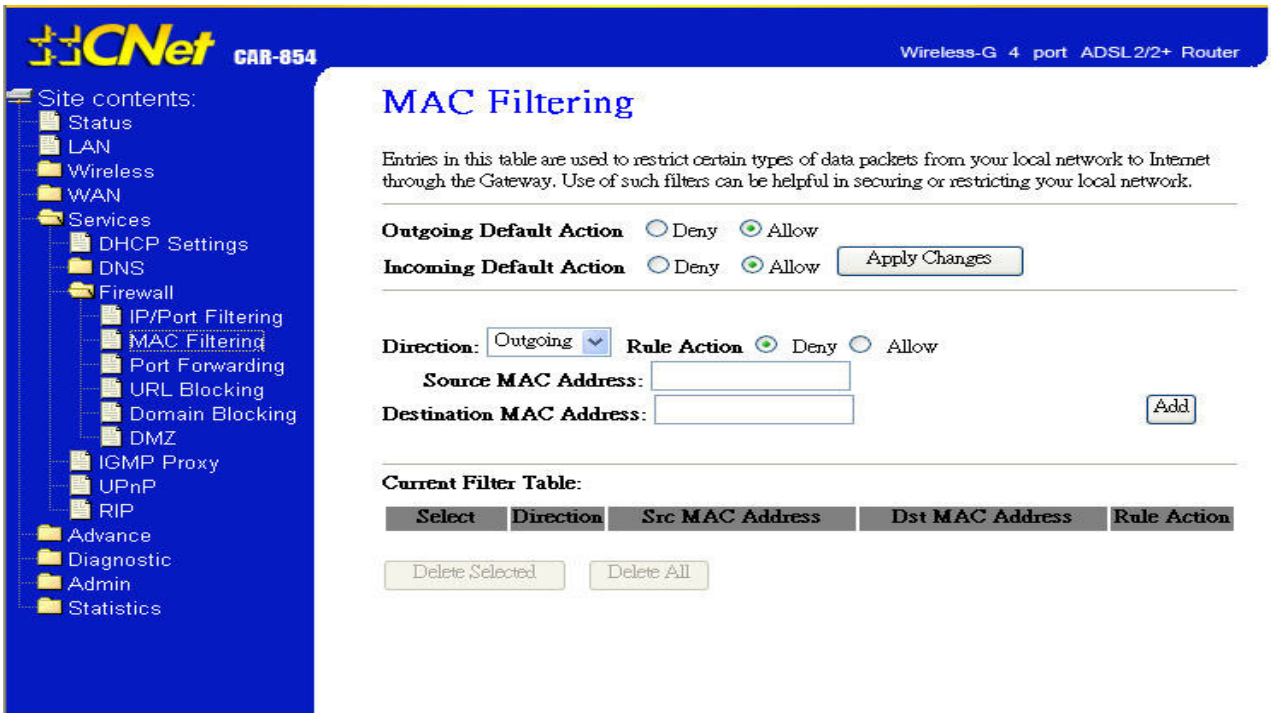
Delete selected filtering rules from the filter table. You can click the checkbox at the **Select** column to select the filtering rule.

Delete ll

Delete all filtering rules from the filter table.

5.5.3.2 MAC Filtering

The MAC filtering feature allows you to define rules to allow or deny frames through the device based on source MAC address, destination MAC address, and traffic direction.



Field	Description
Outgoing Default Action	Specify the default action on the LAN to WAN bridging/forwarding path.
Incoming Default Action	Specify the default action on the WAN to LAN bridging/forwarding path.

Field	Description
Rule Action	Deny or allow traffic when matching this rule
Direction	Traffic bridging/forwarding direction.
Src MAC Address	The source MAC address. It must be xxxxxxxxxxxx format. Blanks can be used in the MAC address space and are considered as don't care.
Dst MAC Address	The destination MAC address. It must be xxxxxxxxxxxx format. Blanks can be used in the MAC address space and are considered as don't care.

Click to save the setting of default actions to the configuration. Fields on the second setting block:

Apply Changes

Click to save the rule entry to the configuration. Function buttons for the **Current Filter Table**:

Delete Selected

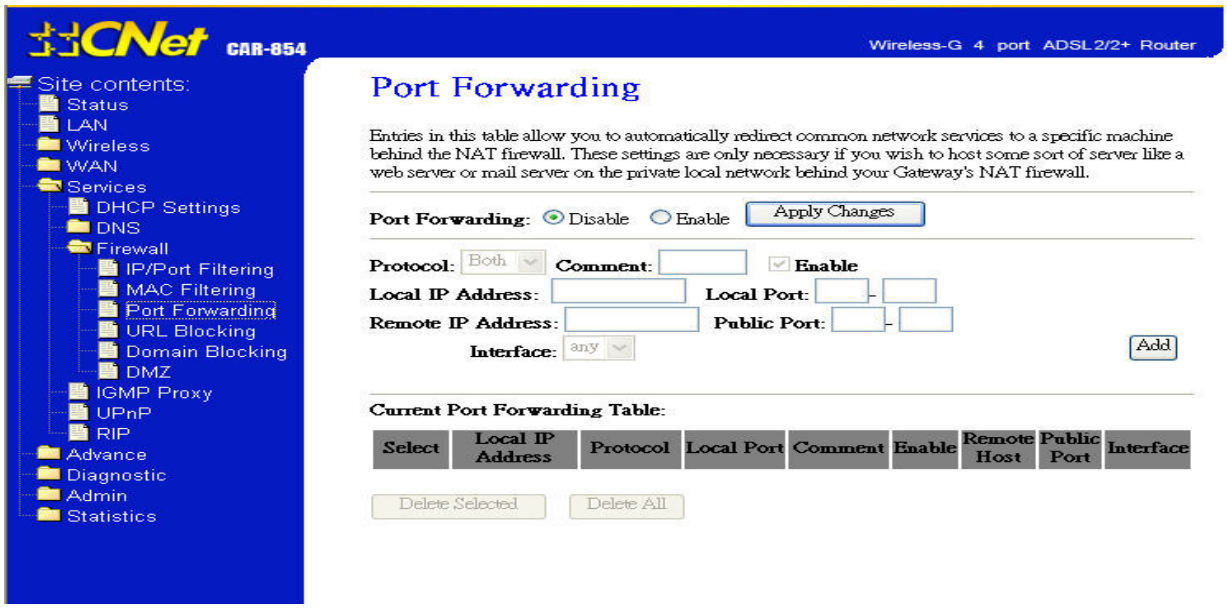
Delete selected filtering rules from the filter table. You can click the checkbox at the **Select** column to select the filtering rule.

Delete All

Delete all filtering rules from the filter table.

5.5.3.3 Port Forwarding

Firewall keeps unwanted traffic from the Internet away from your LAN computers. Add a Port Forwarding entry will create a tunnel through your firewall so that the computers on the Internet can communicate to one of the computers on your LAN on a single port.



Field	Description
Port Forwarding	Check this item to enable or disable the port-forwarding feature.
Protocol	There are 3 options available: TCP, UDP and Both.
Enable	Check this item to enable this entry.
Local IP Address	IP address of your local server that will be accessed by Internet.
Local Port	The destination port number that is made open for this application on the LAN-side.
Remote IP Address	The source IP address from which the incoming traffic is allowed. Leave blank for all.
Public Port	The destination port number that is made open for this application on the WAN-side
Interface	Select the WAN interface on which the port-forwarding rule is to be applied.

Apply Changes

Click to save the rule entry to the configuration. Function buttons for the **Current Port Forwarding Table**:

Delete Selected

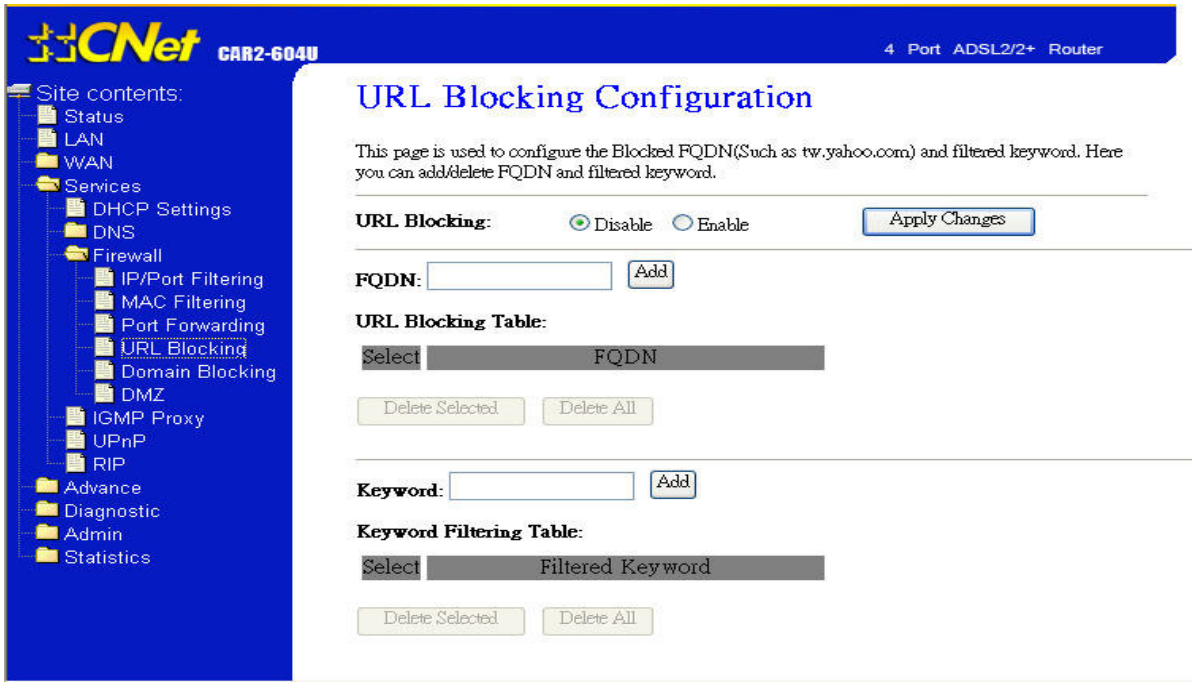
Delete the selected port forwarding rules from the forwarding table. You can click the checkbox at the **Select** column to select the forwarding rule.

Delete All

Delete all forwarding rules from the forwarding table.

5.5.3.4 URL Blocking

This page is used to configure the Blocked FQDN(Such as tw.yahoo.com) and filtered keyword.



Apply Changes

Click to Enable/Disable the URL Blocking to the configuration.

Delete Selected

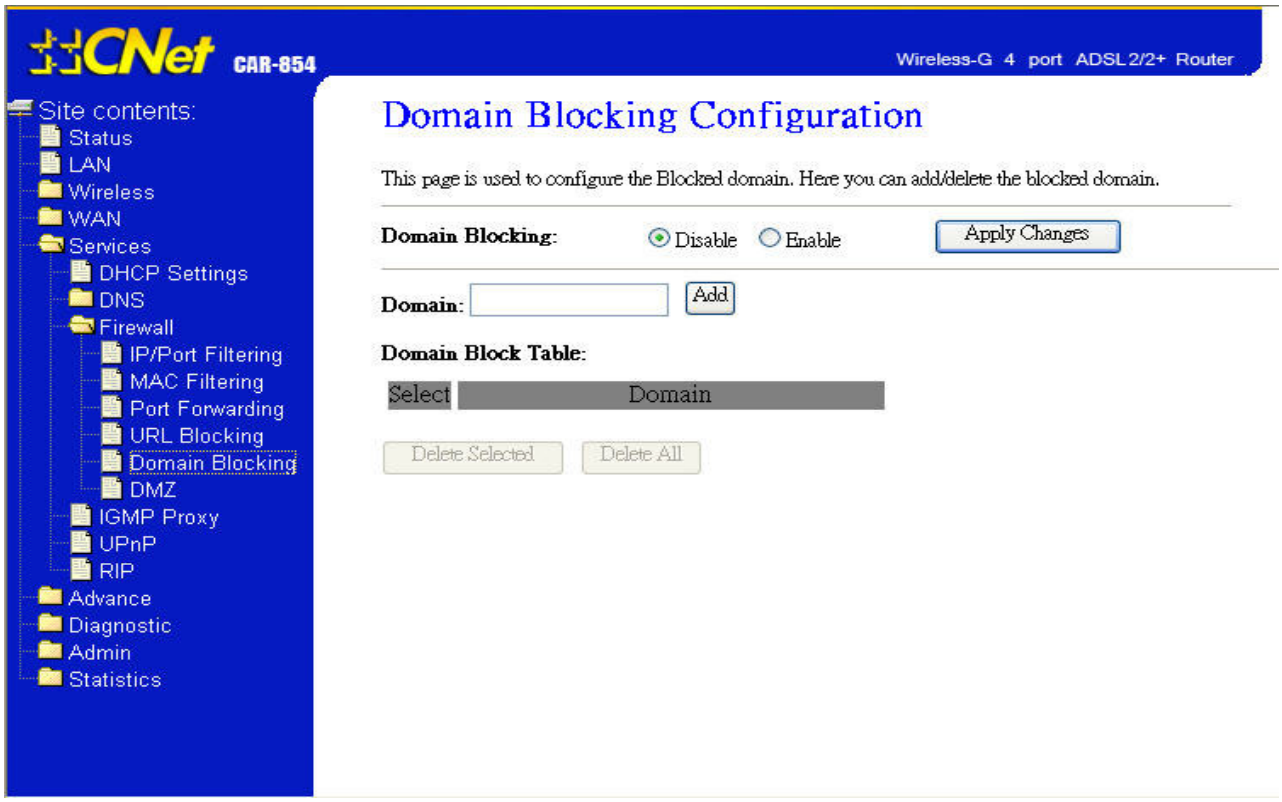
Delete the selected data from the table.

Delete All

Delete all the data from the table.

5.5.3.5 Domain Blocking

This page is used to configure the Blocked domain. Here you can add/delete the blocked domain.



Apply Changes

Click to Enable/Disable the Domain Blocking to the configuration.

Delete Selected

Delete the selected data from the table.

Delete All

Delete all the data from the table.

5.5.3.6 DMZ

A DMZ (Demilitarized Zone) allows a single computer on your LAN to expose ALL of its ports to the Internet. Enter the IP address of that computer as a DMZ (Demilitarized Zone) host with unrestricted Internet access. When doing this, the

DMZ host is no longer behind the firewall.

Field	Description
DMZ Host	Check this item to enable of disable the DMZ feature.
DMZ Host IP Address	IP address of the local host. This feature sets a local host to be exposed to the Internet.

Apply Changes

Click to save the setting to the configuration.

5.5.4 IGMP Proxy Configuration

Multicasting is useful when the same data needs to be sent to more than one hosts. Using multicasting as opposed to sending the same data to the individual hosts uses less network bandwidth. The multicast feature also enables you to receive multicast video stream from multicast servers. IP hosts use Internet Group Management Protocol (IGMP) to report their multicast group memberships to neighboring routers. Similarly, multicast routers use IGMP to discover which of their hosts belong to multicast groups. This device supports IGMP proxy that handles IGMP messages. When enabled, this device acts as a proxy for a LAN host making requests to join and leave multicast groups, or a multicast router sending multicast packets to multicast group on the WAN side. When a host wishes to join a multicast group, it sends IGMP REPORT message to the device's IGMP downstream interface. The proxy sets up a multicast route for the interface and host requesting the video content. It then forwards the Join to the upstream multicast router. The multicast IP traffic will then be forwarded to the requesting host. On a leave, the proxy removes the route and then forwards the leave to the upstream multicast router. The IGMP Proxy page allows you to enable multicast on WAN and LAN interfaces. The LAN interface is always served as downstream IGMP proxy, and you can configure one of the available WAN interfaces as the upstream IGMP proxy.

Upstream: The interface that IGMP requests from hosts are sent to the multicast router.

Downstream: The interface data from the multicast router are sent to hosts in the multicast group database.

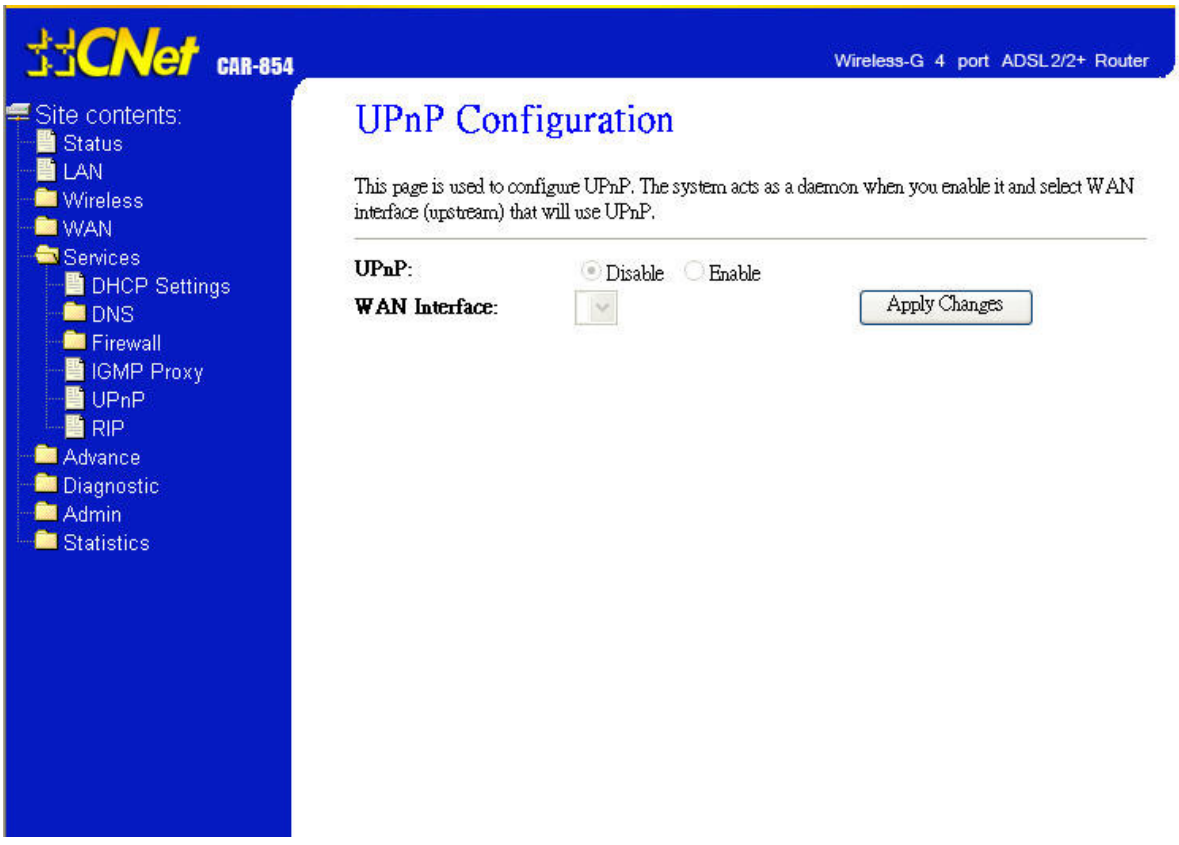
Field	Description
IGMP Proxy	Enable/disable IGMP proxy feature
Proxy Interface	The upstream WAN interface is selected here.

Apply Changes

Click to save the setting to the configuration.

5.5.5 UPnP Configuration

The DSL device supports a control point for Universal Plug and Play (UPnP) version 1.0, and supports two key features: **NAT Traversal** and **Device Identification**. This feature requires one active WAN interface. In addition, the host should support this feature. In the presence of multiple WAN interfaces, select an interface on which the incoming traffic is present. With NAT Traversal, when an UPnP command is received to open ports in NAT, the application translates the request into system commands to open the ports in NAT and the firewall. The interface to open the ports on is given to UPnP when it starts up and is part of the configuration of the application. For Device Identification, the application will send a description of the DSL device as a control point back to the host making the request.



Field	Description
UPnP	Enable/disable UPnP feature.
WAN Interface	Select WAN interface that will use UPnP from the drop-down lists.

Apply Changes

Click to save the setting to the system configuration.

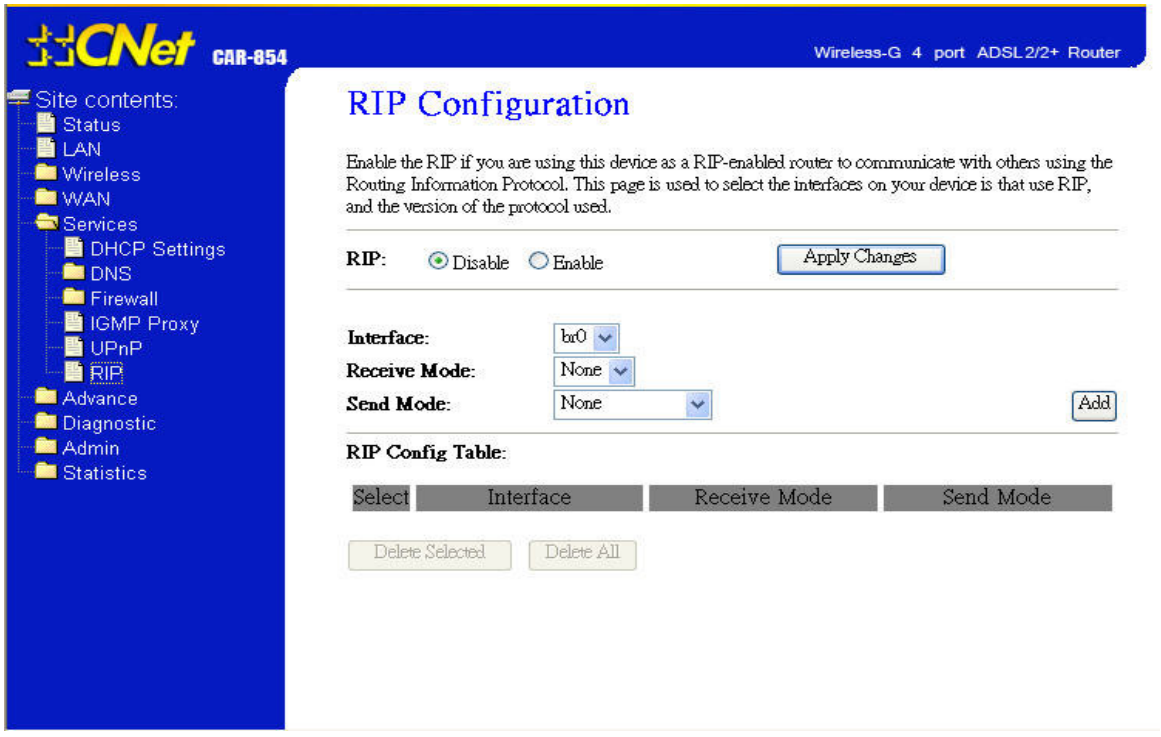
5.5.6 RIP Configuration

RIP is an Internet protocol you can set up to share routing table information with other routing devices on your LAN, at your ISP's location, or on remote networks connected to your network via the ADSL line. Most small home or office networks do not need to use RIP; they have only one router, such as the ADSL Router, and one path to an ISP. In these cases, there is no need to share routes, because all Internet data from the network is sent to the same ISP gateway. You may want to configure RIP if any of the following circumstances apply to your network:

Your home network setup includes an additional router or RIP-enabled PC (other than the ADSL Router). The ADSL Router and the router will need to communicate via RIP to share their routing tables.

Your network connects via the ADSL line to a remote network, such as a corporate network. In order for your LAN to learn the routes used within your corporate network, they should both be configured with RIP.

Your ISP requests that you run RIP for communication with devices on their network.



Fields on the first setting block:

Field	Description
RIP	Enable/disable RIP feature.

Apply Changes

Click to save the setting of this setting block to the system configuration

Fields on the second setting block:

Field	Description
Interface	The name of the interface on which you want to enable RIP.
Receive Mode	Indicate the RIP version in which information must be passed to the DSL device in order for it to be accepted into its routing table.
Send Mode	Indicate the RIP version this interface will use when it sends its route information to other devices.

Function buttons for the second setting block in this page:

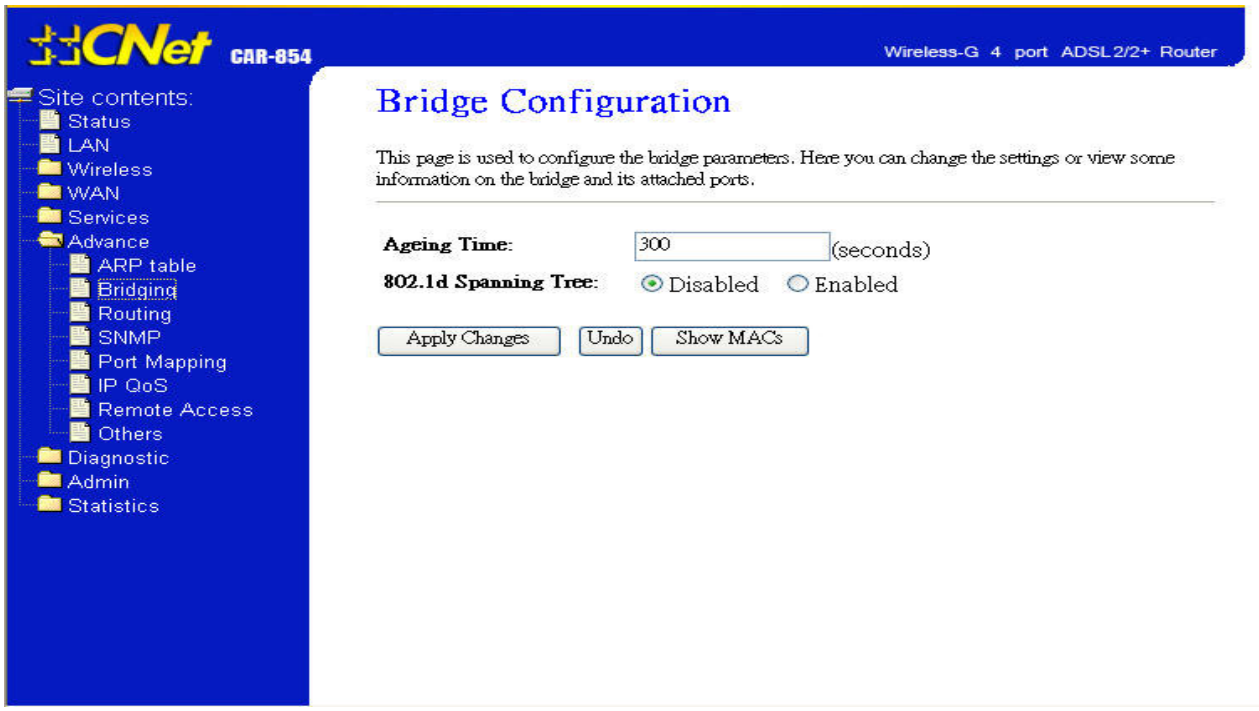
Add

Add a RIP entry and the new RIP entry will be display in the table

5.6 Advance Configuration

5.6.1 Bridging

You can enable/disable Spanning Tree Protocol and set MAC address aging time in this page.



Field	Description
Ageing Time	Set the Ethernet address ageing time, in seconds. After [Ageing Time] seconds of not having seen a frame coming from a certain address, the bridge will time out (delete) that address from Forwarding DataBase (fdb).
802.1d Spanning Tree	Enable/disable the spanning tree protocol

Save this bridge configuration. New configuration will take effect after saving into flash memory and rebooting the system. See section "Admin" for details.

Show MACs

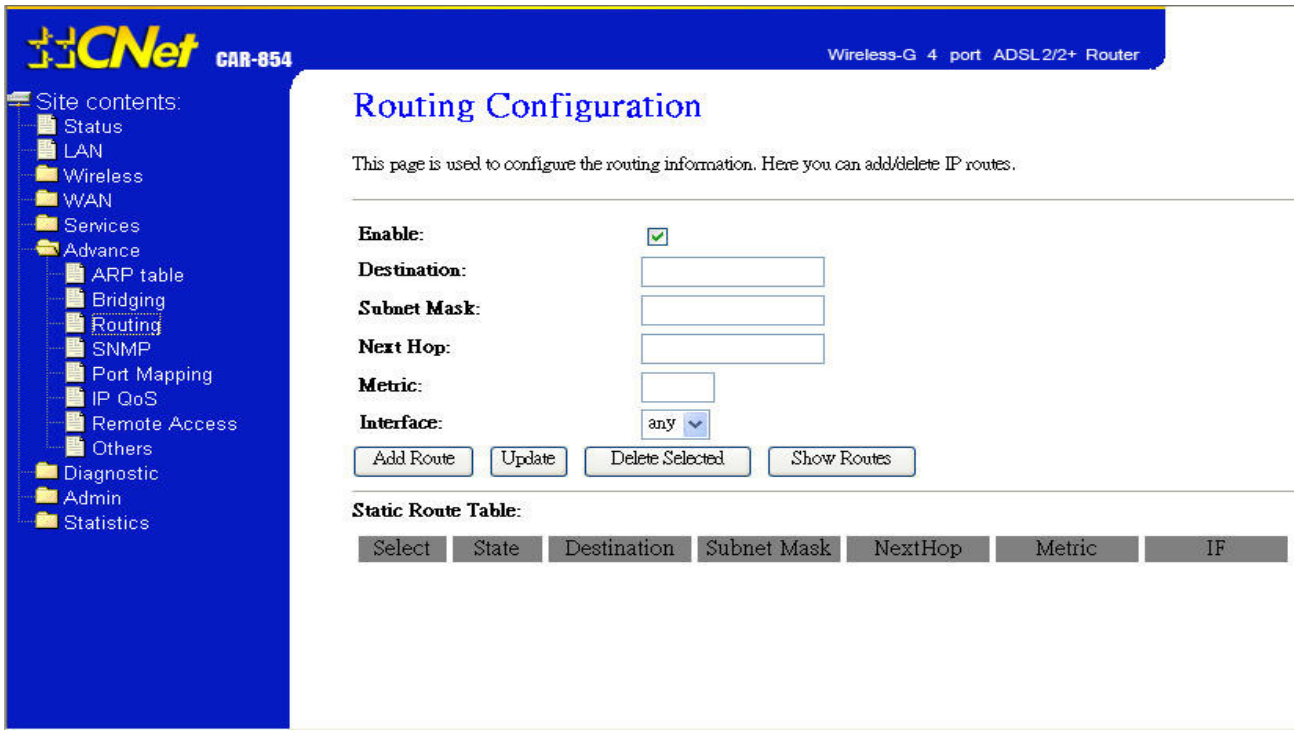
List the MAC address in forwarding table.

5.6.2 Routing

The Routing page enables you to define specific route for your Internet and network data. Most users do not need to define routes. On a typical small home or office LAN, the existing routes that set up the default gateways for your LAN hosts and for the DSL device provide the most appropriate path for all your Internet traffic.

On your LAN hosts, a default gateway directs all Internet traffic to the LAN port(s) on the DSL device. Your LAN hosts know their default gateway either because you assigned it to them when you modified your TCP/IP properties, or because you configured them to receive the information dynamically from a server whenever they access the Internet. On the DSL device itself, a default gateway is defined to direct all outbound Internet traffic to a route at your ISP. The default gateway is assigned either automatically by your ISP whenever the device negotiates an Internet access, or manually by user to setup through the configuration.

You may need to define routes if your home setup includes two or more networks or subnets, if you connect to two or more ISP services, or if you connect to a remote corporate LAN.



Field	Description
Enable	Check to enable the selected route or route to be added.
Destination	The network IP address of the subnet. The destination can be specified as the IP address of a subnet or a specific host in the subnet. It can also be specified as all zeros to indicate that this route should be used for all destinations for which no other route is defined (this is the route that creates the default gateway).
Subnet Mask	The network mask of the destination subnet. The default gateway uses a mask of 0.0.0.0.
Next Hop	The IP address of the next hop through which traffic will flow towards the destination subnet.
Metric	Defines the number of hops between network nodes that data packets travel. The default value is 0, which means that the subnet is directly one hop away on the local LAN network.
Interface	The WAN interface to which a static routing subnet is to be applied.

Function buttons in this page:

Add Route

Add a user-defined destination route.

Update

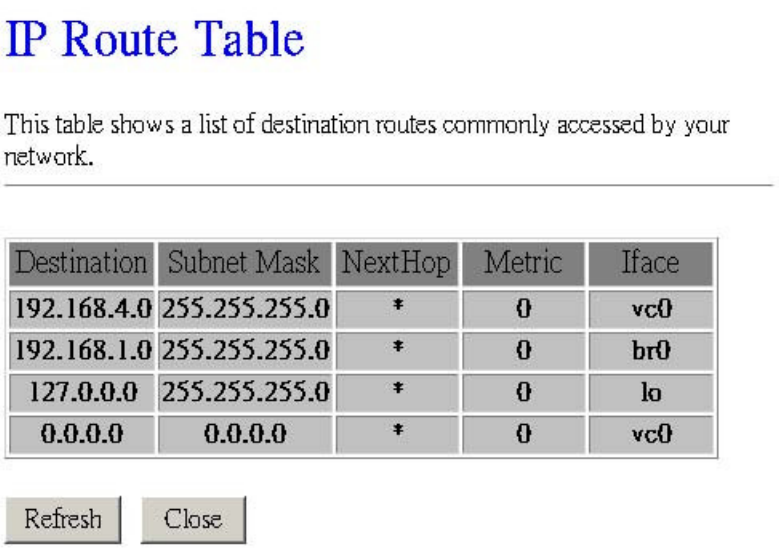
Update the selected destination route on the **Static Route Table**.

Delete Selected

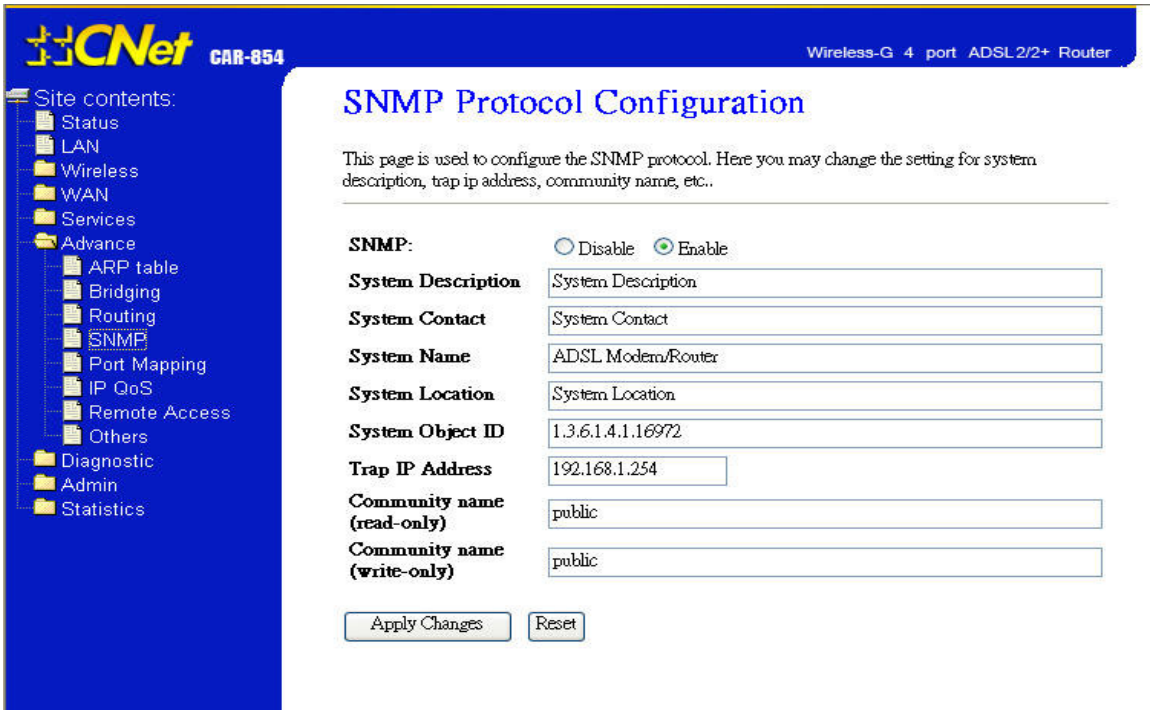
Delete a selected destination route on the **Static Route Table**.

Show Routes

Click this button to view the DSL device's routing table. The IP Route Table displays, as shown in Figure.



5.6.3 SNMP Configuration



Simple Network Management Protocol (SNMP) is a troubleshooting and management protocol that uses the UDP protocol on port 161 to communicate between clients and servers. The DSL device can be managed locally or remotely by SNMP protocol.

Fields in this page:

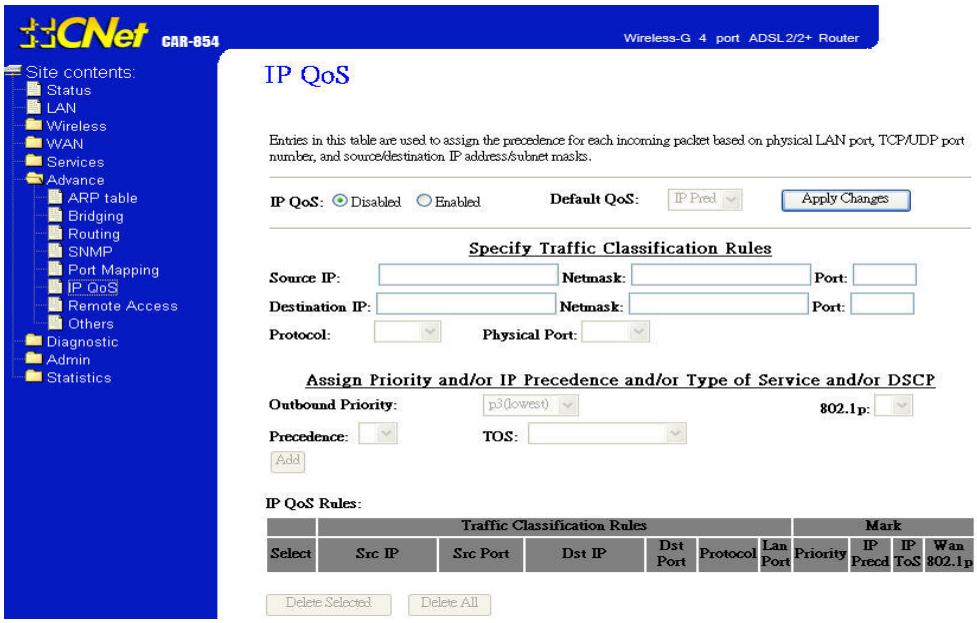
Field	Description
System Description	System description of the DSL device.
System Contact	Contact person and/or contact information for the DSL device.
System Name	An administratively assigned name for the DSL device.
System Location	The physical location of the DSL device.
System Object ID	Vendor object identifier. The vendor's authoritative identification of the network management subsystem contained in the entity.
Trap IP Address	Destination IP address of the SNMP trap.
Community name (read-only)	Name of the read-only community. This read-only community allows read operation to all objects in the MIB.
Community name (write-only)	Name of the read-only community. This write-only community allows write operation to the objects defines as read-writable in the MIB.

Apply Changes

Save SNMP configuration. New configuration will take effect after saving into flash memory and rebooting the system. See section "Admin" for details.

5.6.4 IP QoS

The DSL device provides a control mechanism that can provide different priority to different users or data flows. The QoS is enforced by the QoS rules in the QoS table. A QoS rule contains two configuration blocks: **Traffic Classification** and **Action**. The **Traffic Classification** enables you to classify packets on the basis of various fields in the packet and perhaps the physical ingress port. The **Action** enables you to assign the strictly priority level for and mark some fields in the packet that matches the Traffic Classification rule. You can configure any or all field as needed in these two QoS blocks for a QoS rule.



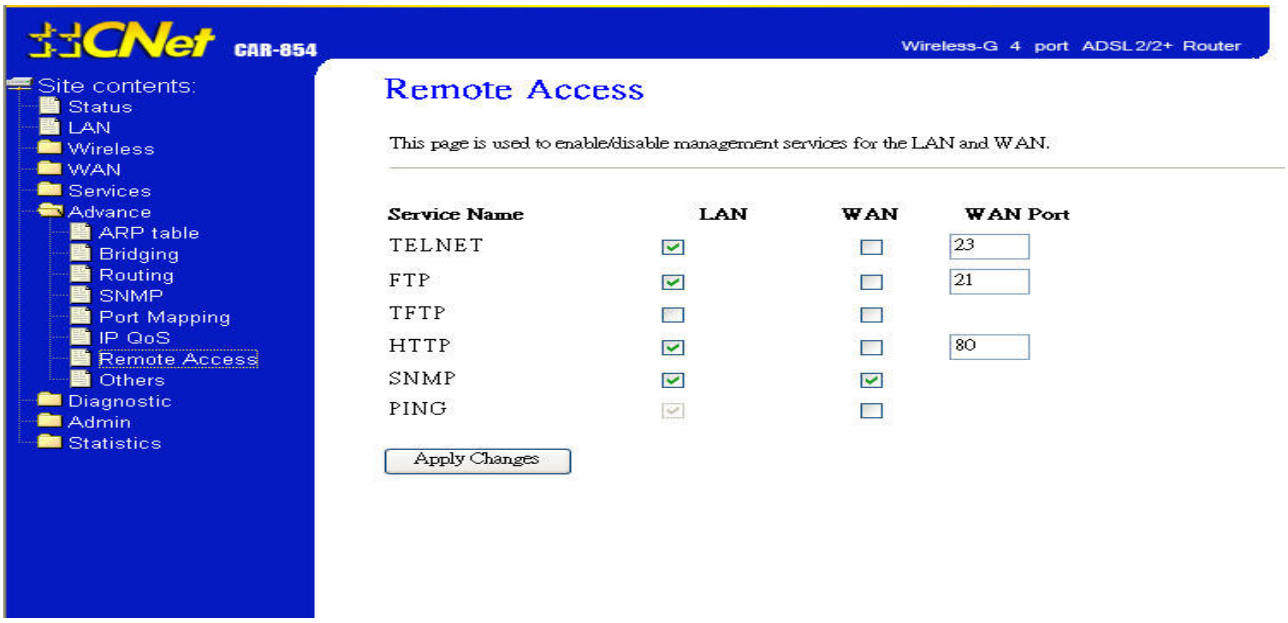
Field	Description
IP QoS	Enable/disable the IP QoS function.
Source IP	The IP address of the traffic source.
Source Netmask	The source IP netmask. This field is required if the source IP has been entered.
Destination IP	The IP address of the traffic destination.
Destination Netmask	The destination IP netmask. This field is required if the destination IP has been entered.
Protocol	The selections are TCP, UDP, ICMP and the blank for none. This field is required if the source port or destination port has been entered.
Source Port	The source port of the selected protocol. You cannot configure this field without entering the protocol first.
Destination Port	The destination port of the selected protocol. You cannot configure this field without entering the protocol first.
Physical Port	The incoming ports. The selections include LAN ports, wireless port, and the blank for not applicable.

Fields on the second setting block of this page:

Field	Description
Outbound Priority	The priority level for the traffic that matches this classification rule. The possible selections are (in the descending priority): p0, p1, p2, p3.
IP Precedence	Select this field to mark the IP precedence bits in the packet that match this classification rule.
IP Type of Service	Select this field to mark the IP TOS bits in the packet that match this classification rule.
802.1p	Select this field to mark the 3-bit user-priority field in the 802.1p header of the packet that match this classification rule. Note that this 802.1p marking is workable on a given PVC channel only if the VLAN tag is enabled in this PVC channel.

5.6.5 Remote Access

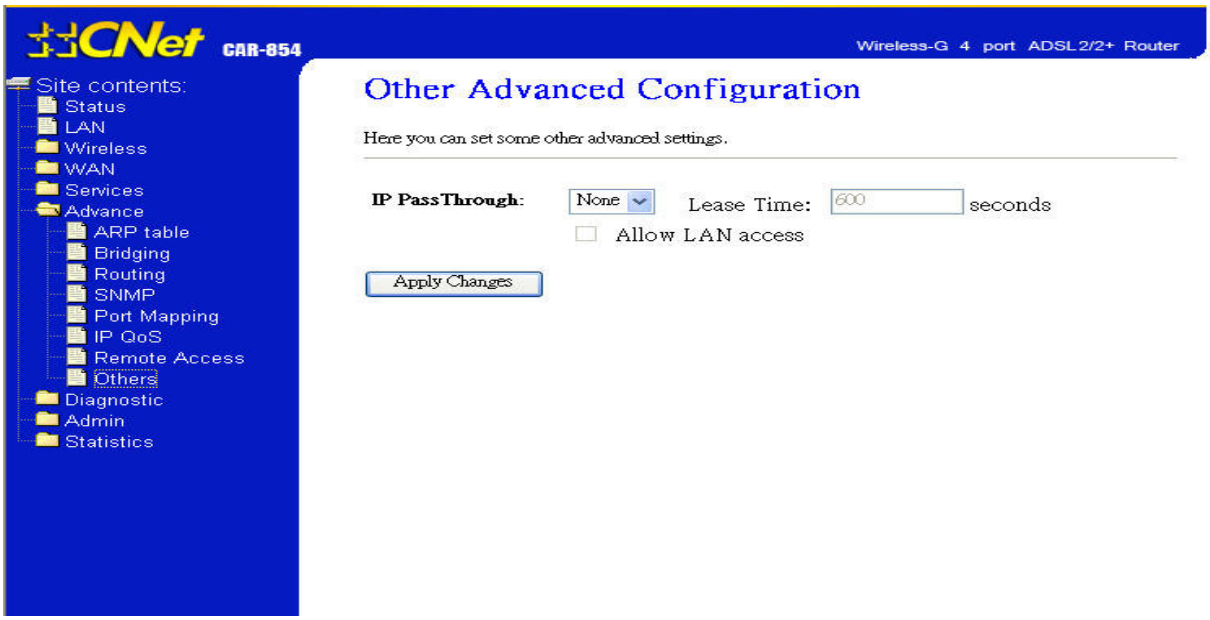
The Remote Access function can secure remote host access to your DSL device from LAN and WLAN interfaces for some services provided by the DSL device.



Fields in this page:

Field	Description
LAN	Check/un-check the services on the LAN column to allow/un-allow the services access from LAN side; and "WAN":
WAN	Check/un-check the services on the WAN column to allow/un-allow the services access from WAN side.
WAN Port	This field allows the user to specify the port of the corresponding service. Take the HTTP service for example; when it is changed to 8080, the HTTP server address for the WAN side is http://dsl_addr:8080, where the dsl_addr is the WAN side IP address of the DSL

5.6.6 Others

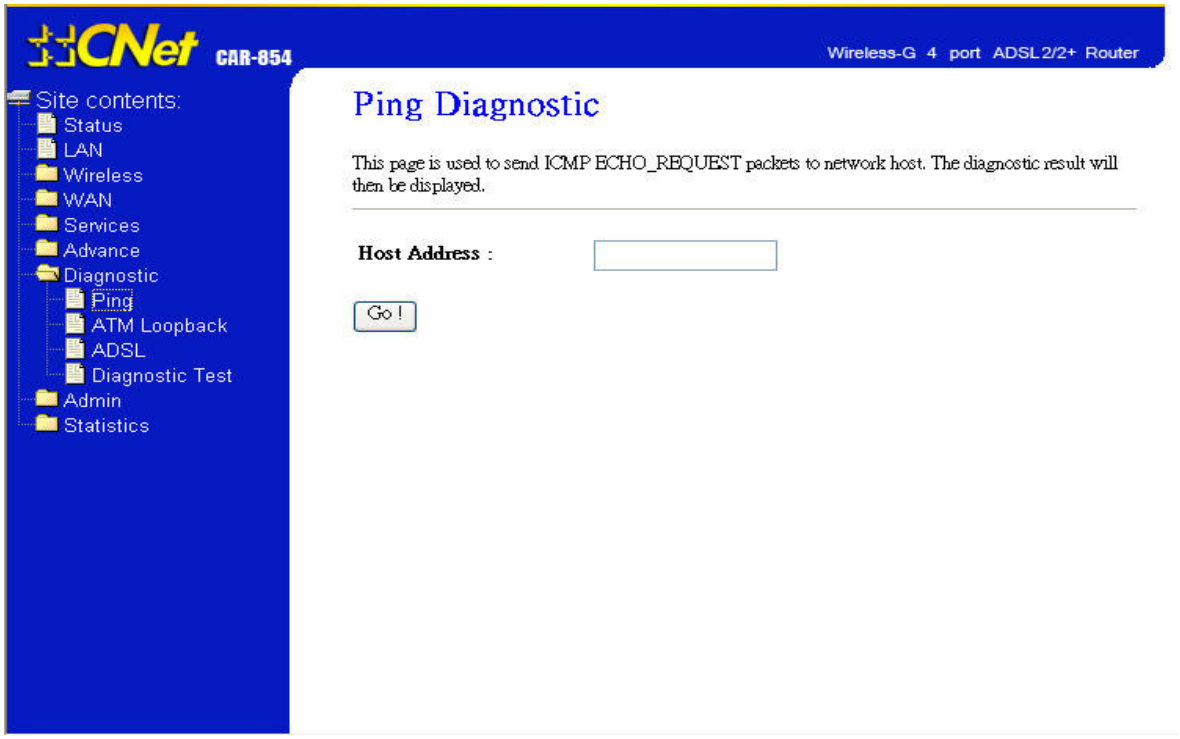


5.7 Diagnostic

The DSL device supports some useful diagnostic tools.

5.7.1 Ping

Once you have your DSL device configured, it is a good idea to make sure you can ping the network. A ping command sends a message to the host you specify. If the host receives the message, it sends messages in reply. To use it, you must know the IP address of the host you are trying to communicate with and enter the IP address in the Host Address field. Click Go! To start the ping command, the ping result will then be shown in this page.



Fields in this page:

Field	Description
Host Address	The IP address you want to ping.

5.7.2 ATM Loopback

In order to isolate the ATM interface problems, you can use ATM OAM loopback cells to verify connectivity between VP/VC endpoints, as well as segment endpoints within the VP/VC. ATM uses F4 and F5 cell flows as follows:

F4: used in VPs

F5: used in VCs

An ATM connection consists of a group of points. This OAM implementation provides management for the following points:

Connection endpoint: the end of a VP/VC connection where the ATM cell are terminated

Segment endpoint: the end of a connection segment

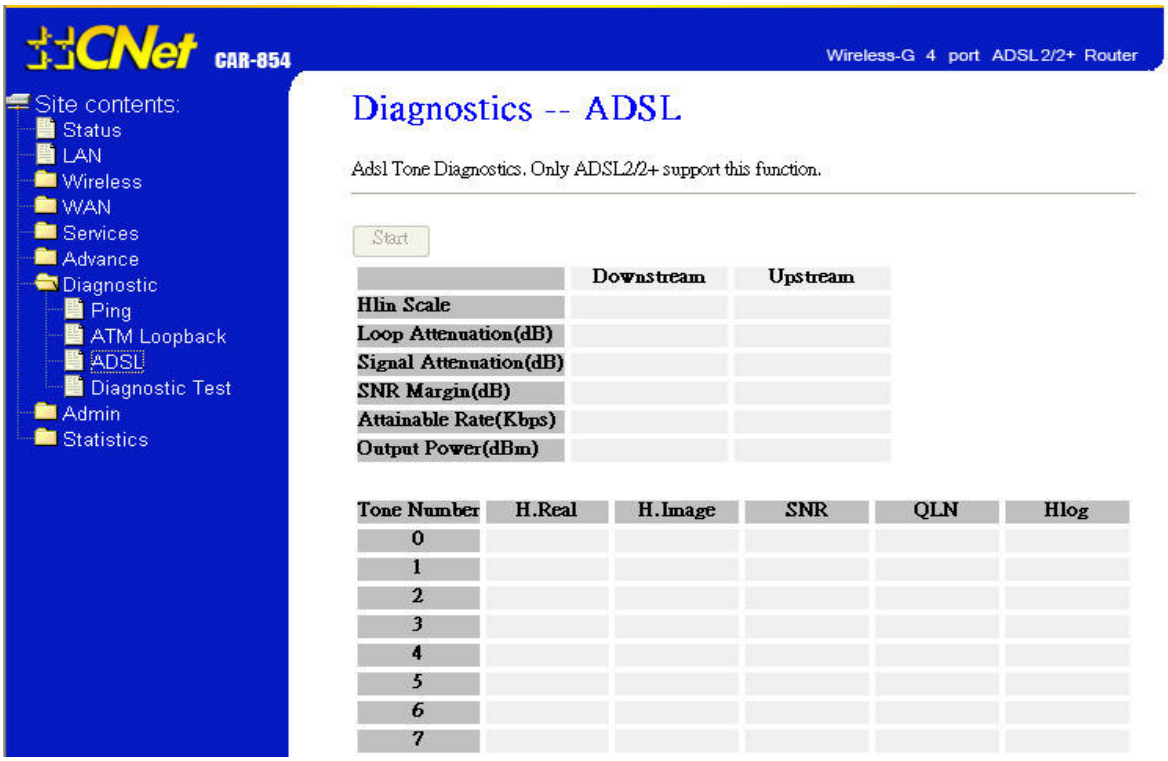
This page allows you to use ATM ping, which generates F5 segment and end-to-end loop-back cells to test the reach ability of a segment endpoint or a connection endpoint.

Fields in this page:

Field	Description
Select PVC	Select the PVC channel you want to do the loop-back diagnostic.
Flow Type	The ATM OAM flow type. The selection can be F5 Segment or F5 End-to-End.
Loopback Location ID	The loop-back location ID field of the loop-back cell. The default value is all 1s (ones) to indicate the endpoint of the segment or connection.

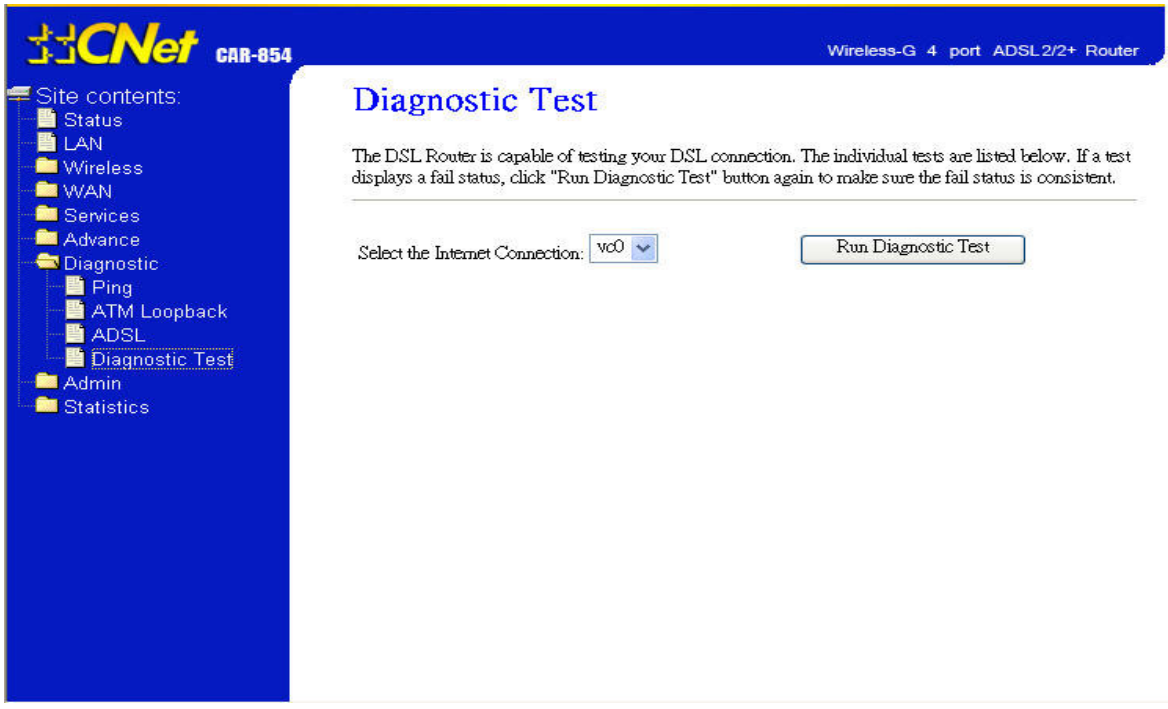
5.7.3 ADSL

This page shows the ADSL diagnostic result. Click **Start** button to start the ADSL diagnostic.



5.7.4 Diagnostic Test

The Diagnostic Test page shows the test results for the connectivity of the physical layer and protocol layer for both LAN and WAN sides.



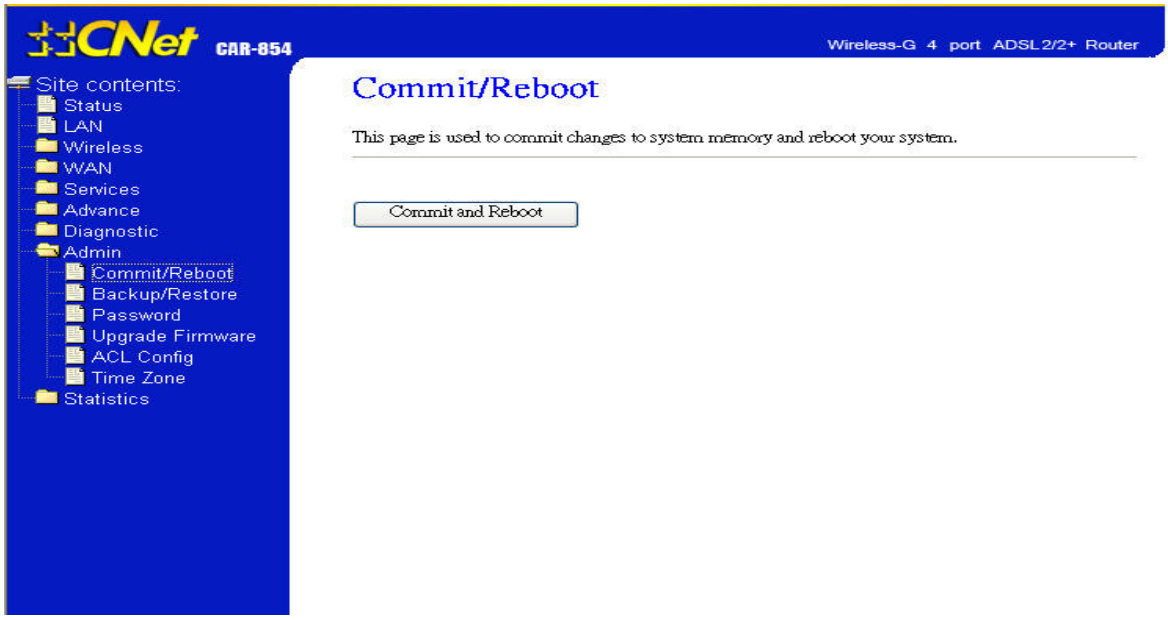
Fields in this page:

Field	Description
Select the Internet Connection	The available WAN side interfaces are listed. You have to select one for the WAN side diagnostic.

5.8 Admin

5.8.1 Commit/Reboot

Whenever you use the Web configuration to change system settings, the changes are initially placed in temporary storage. These changes will be lost if the device is reset or turn off. To save your change for future use, you can use the commit function.



Function buttons in this page:

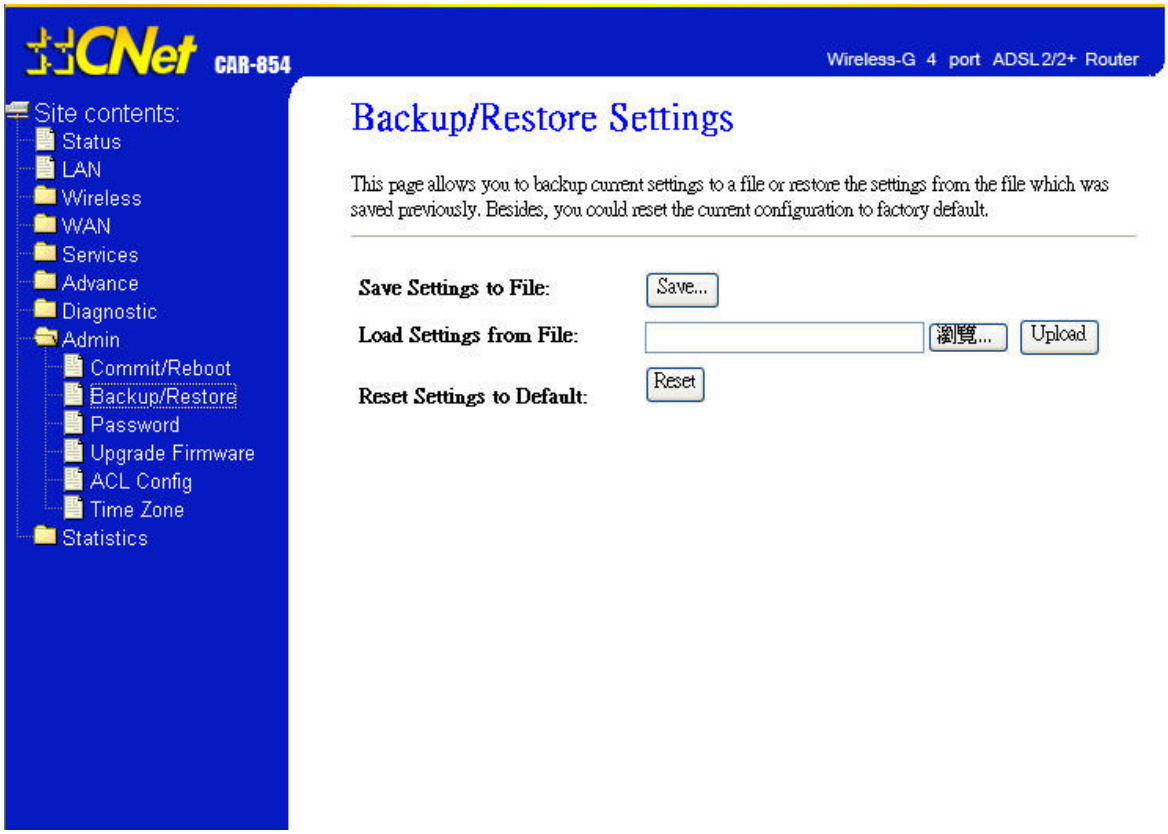
Commit and Reboot

Whenever you use the web console to change system settings, the changes are initially placed in temporary storage. To save your changes for future use, you can use the Commit/Reboot function. This function saves your changes from RAM to flash memory and reboot the system.

IMPORTANT! Do not turn off your modem or press the Reset button while this procedure is in progress.

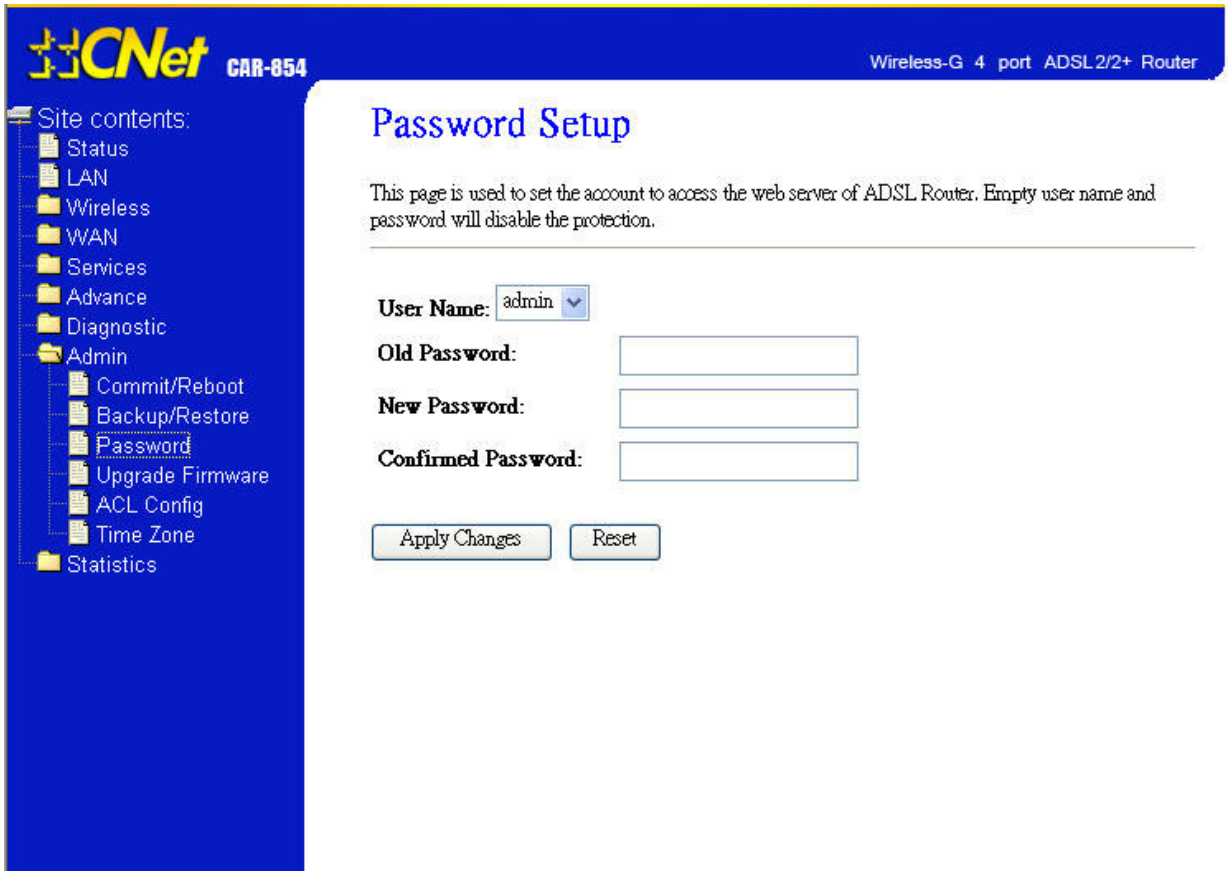
5.8.2 Backup/Restore

This page allows you to backup and restore your configuration into and from file in your host.



5.8.3 Password

The first time you log into the system, you use the default password. There are two-level logins: **admin** and **system**. The **admin** and **system** password configuration allows you to change the password for administrator and user.



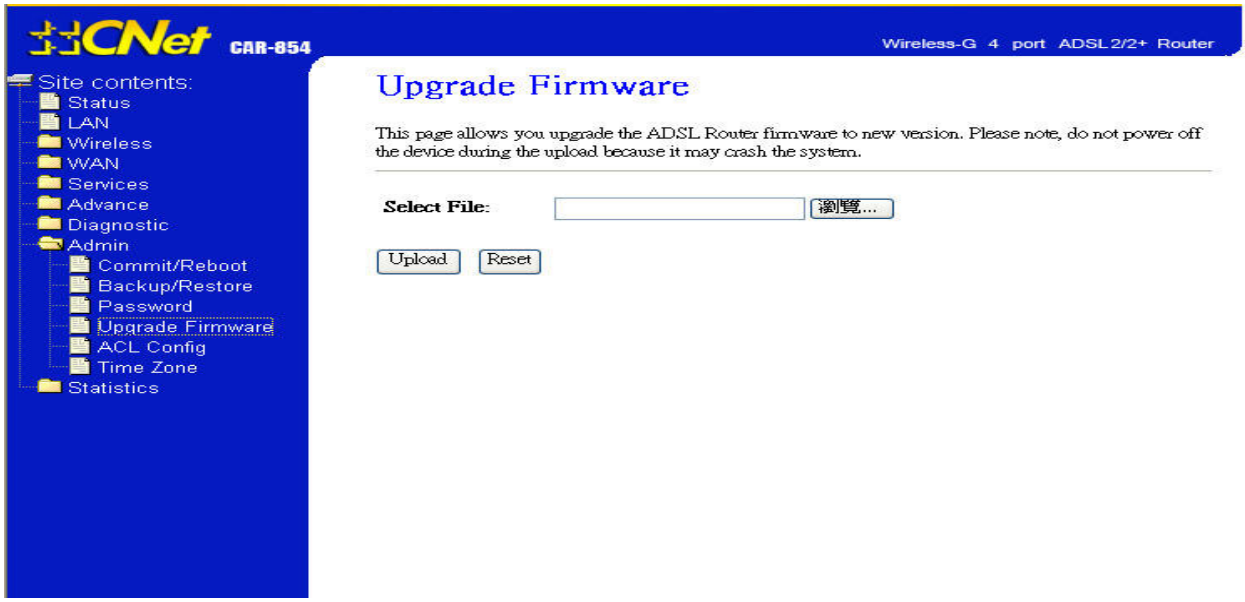
Fields in this page:

Field	Description
User Name	Selection of user levels are: admin and user.
Old Password	Enter the old password for this selected login.
New Password	Enter the new password here.
Confirmed Password	Enter the new password here again to confirm.

5.8.4 Upgrade Firmware

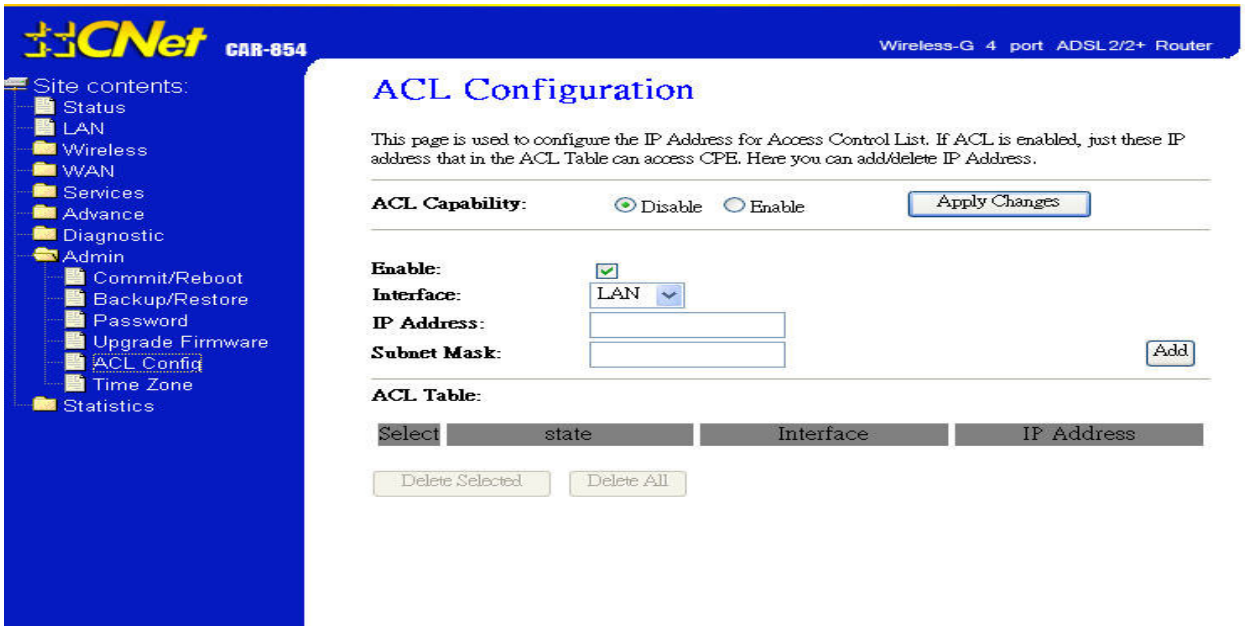
To upgrade the firmware for the DSL device:
Click the Browse button to select the firmware file.
Confirm your selection.
Click the **Upload** button to start upgrading.

IMPORTANT! Do not turn off your DSL device or press the Reset button while this procedure is in progress.



5.8.5 ACL Config

The Access Control List (ACL) is a list of permissions attached to the DSL device. The list specifies who is allowed to access this device. If ACL is enabled, all hosts cannot access this device except for the hosts with IP address in the ACL table.

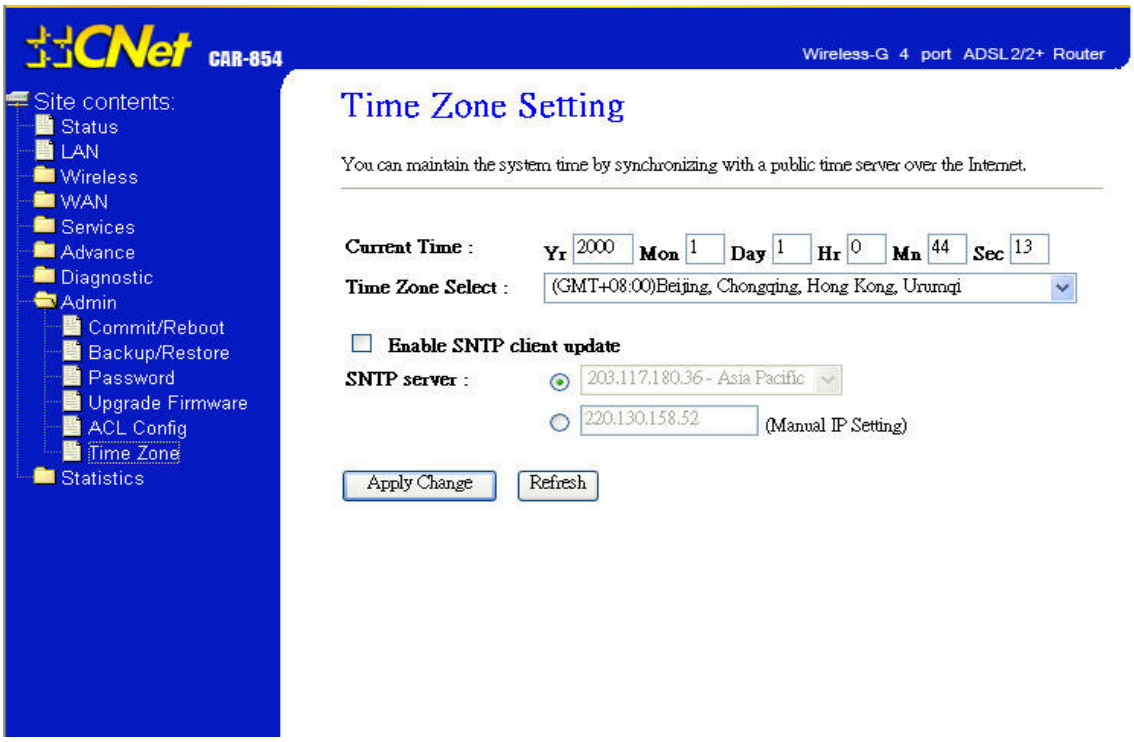


Fields in this page:

Field	Description
ACL Capability	Enable/disable the ACL function
Enable	Check to enable this ACL entry
Interface	Select the interface domain: LAN or WAN
IP Address	Enter the IP address that allows access to this device.

5.8.6 Time Zone

Simple Network Timing Protocol (SNTP) is a protocol used to synchronize the system time to the public SNTP servers. The DSL device supports SNTP client functionality in compliance with IETF RFC2030. SNTP client functioning in daemon mode which issues sending client requests to the configured SNTP server addresses periodically can configure the system clock in the DSL device



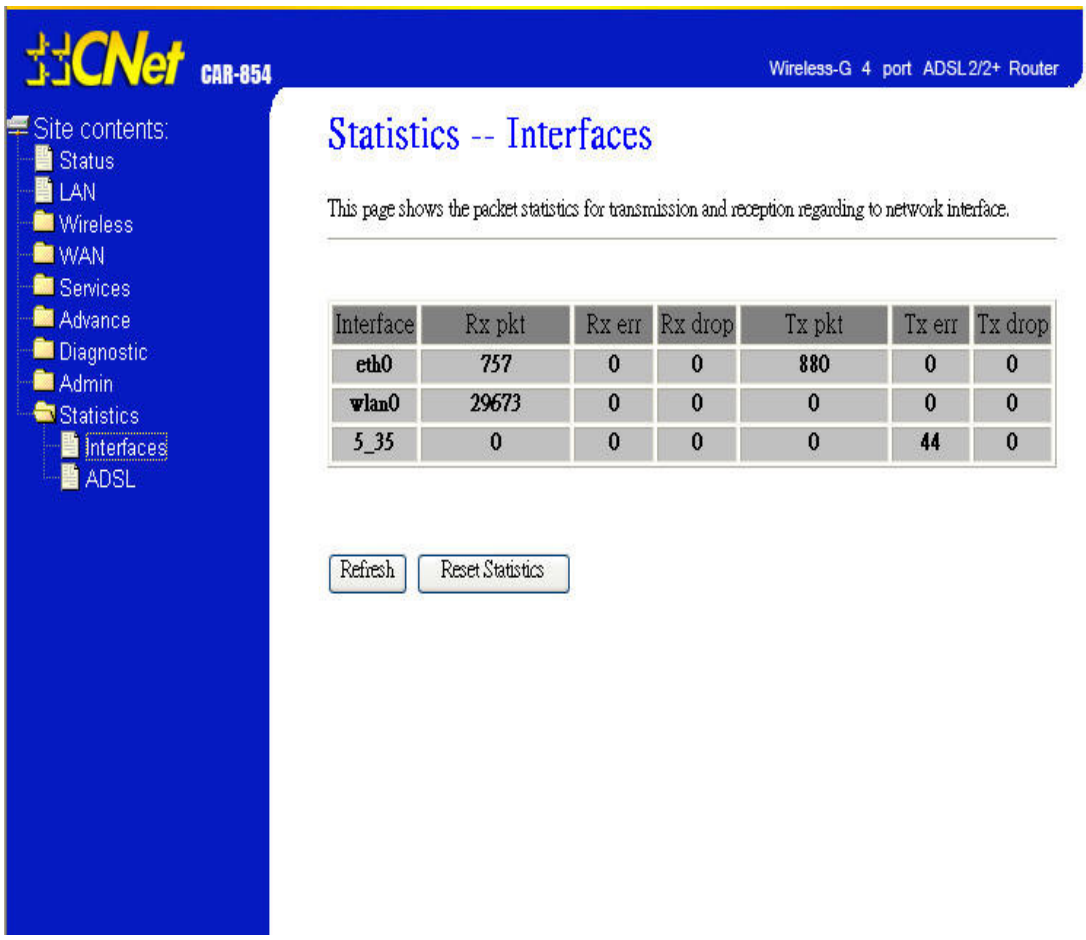
Field	Description
Current Time	The current time of the specified time zone. You can set the current time by yourself or configured by SNTP.
Time Zone Select	The time zone in which the DSL device resides.
Enable SNTP client update	Enable the SNTP client to update the system clock.
SNTP server	The IP address or the host name of the SNTP server. You can select from the list or set it manually.

5.9 Statistics

The DSL device shows the different layer of network statistics information.

5.9.1 Interfaces

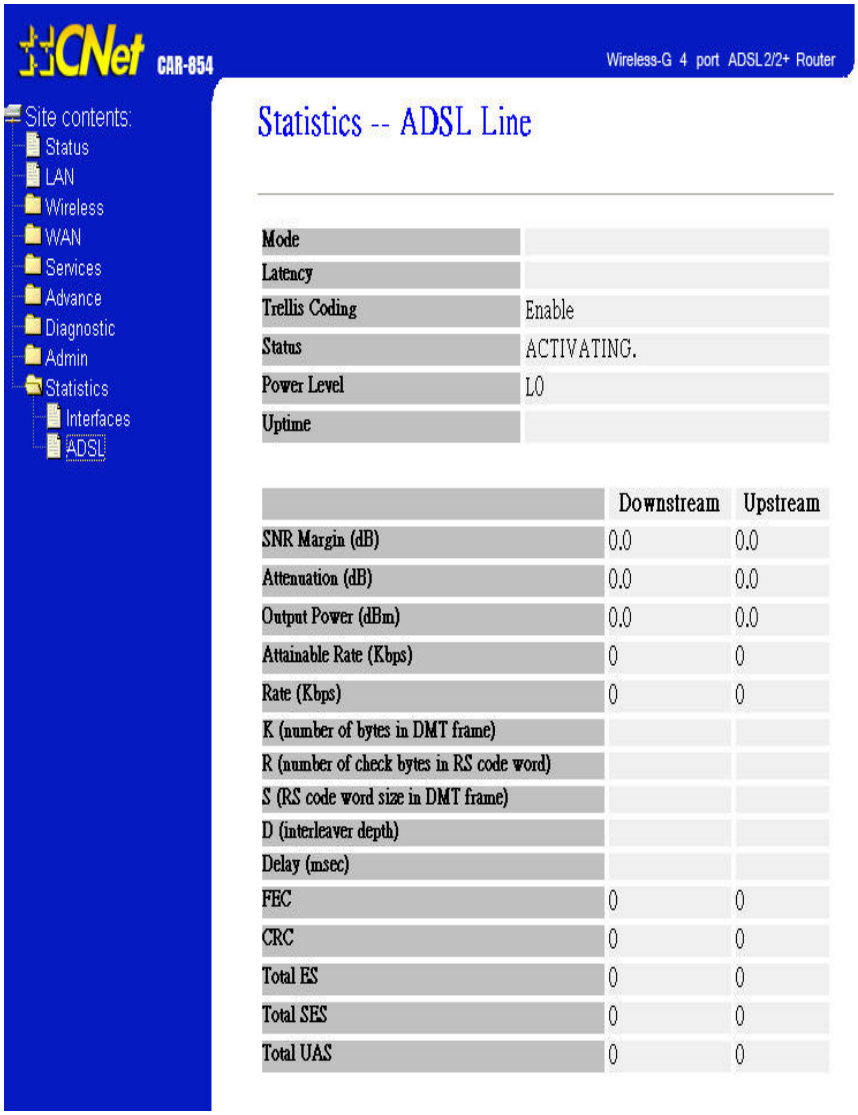
You can view statistics on the processing of IP packets on the networking interfaces. You will not typically need to view this data, but you may find it helpful when working with your ISP to diagnose network and Internet data transmission problems.



To display updated statistics showing any new data since you opened this page, click **Refresh**.

5.9.2 ADSL

This page shows the ADSL line statistic information.

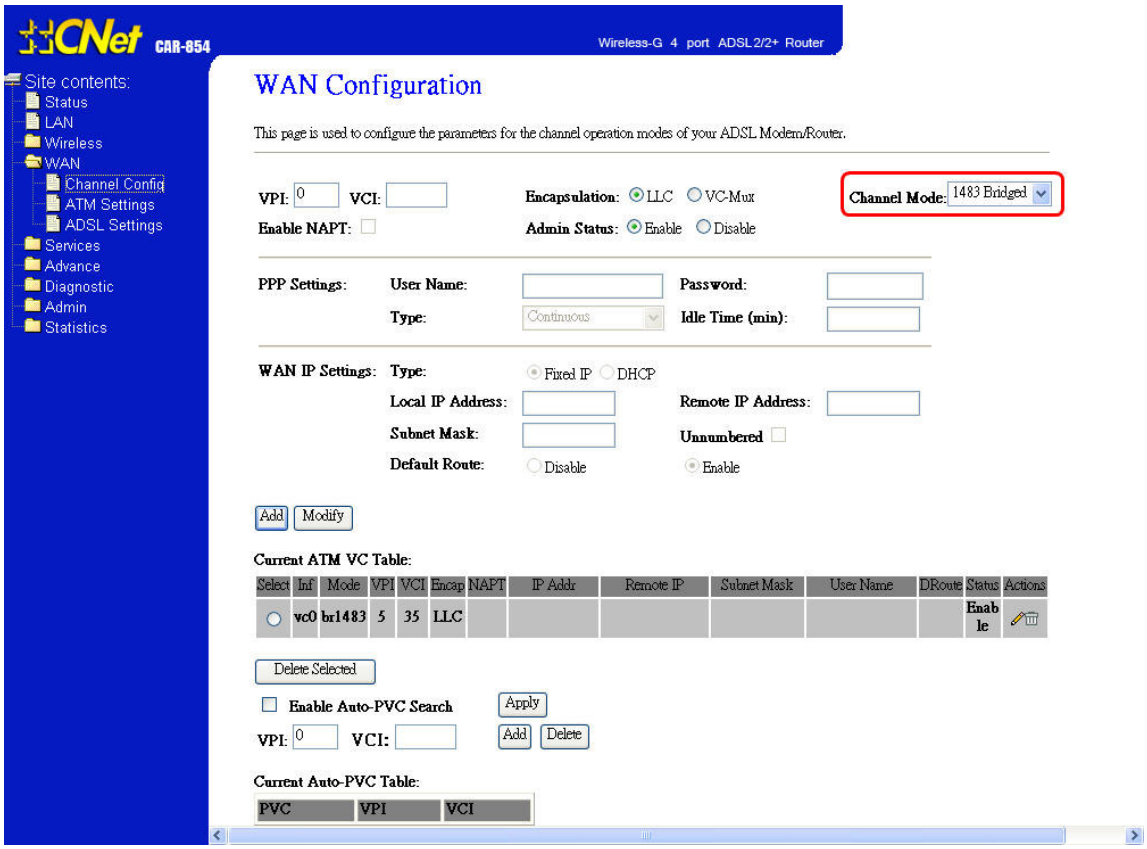


6. Channel Mode Configuration

ADSL router supports multiple channel operation modes. This section will show procedures to configure the router.

6.1 Bridge Mode

ADSL modem/router is bridge mode enabled by factory default. There is a 1483-bridged mode PVC 5/35 in system.



1 Open the WEB page at “WAN/Channel Configuration”.

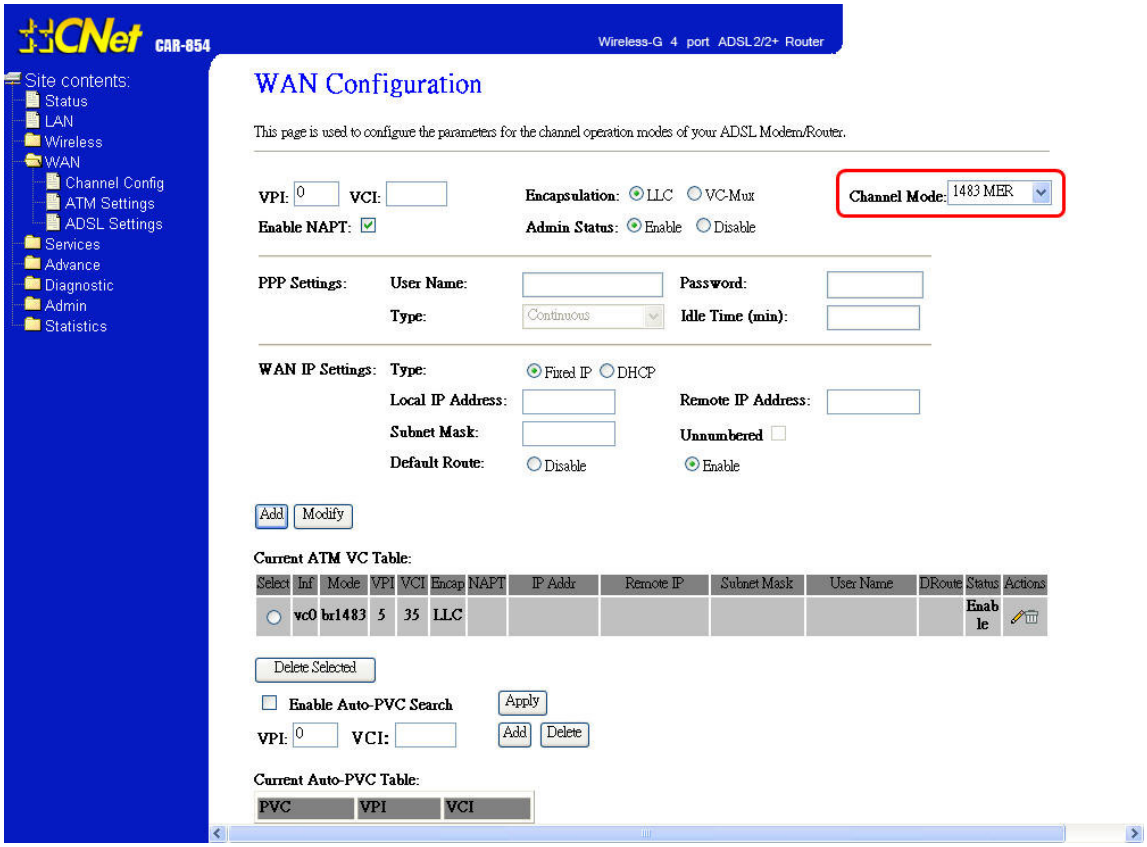
2 Select the Channel Mode to “1483 Bridged”. Set the parameters VPI/VCI and Encapsulation mode according to the CO DSLAM’s setting.

3 Click “Add” button to add this channel into VC table.

4 Open the WEB page at “Admin/Commit/Reboot”. Press “Commit” to save the settings into flash memory.

5 The new settings will take effect after reboot the system.

6.2 MER(Mac Encapsulating Routing) Mode



1 Open the WEB page at “WAN/Channel Configuration”.

2 Select the Channel Mode to “1483 MER”. Set the parameters VPI/VCI and Encapsulation mode according to the CO DSLAM’s setting.

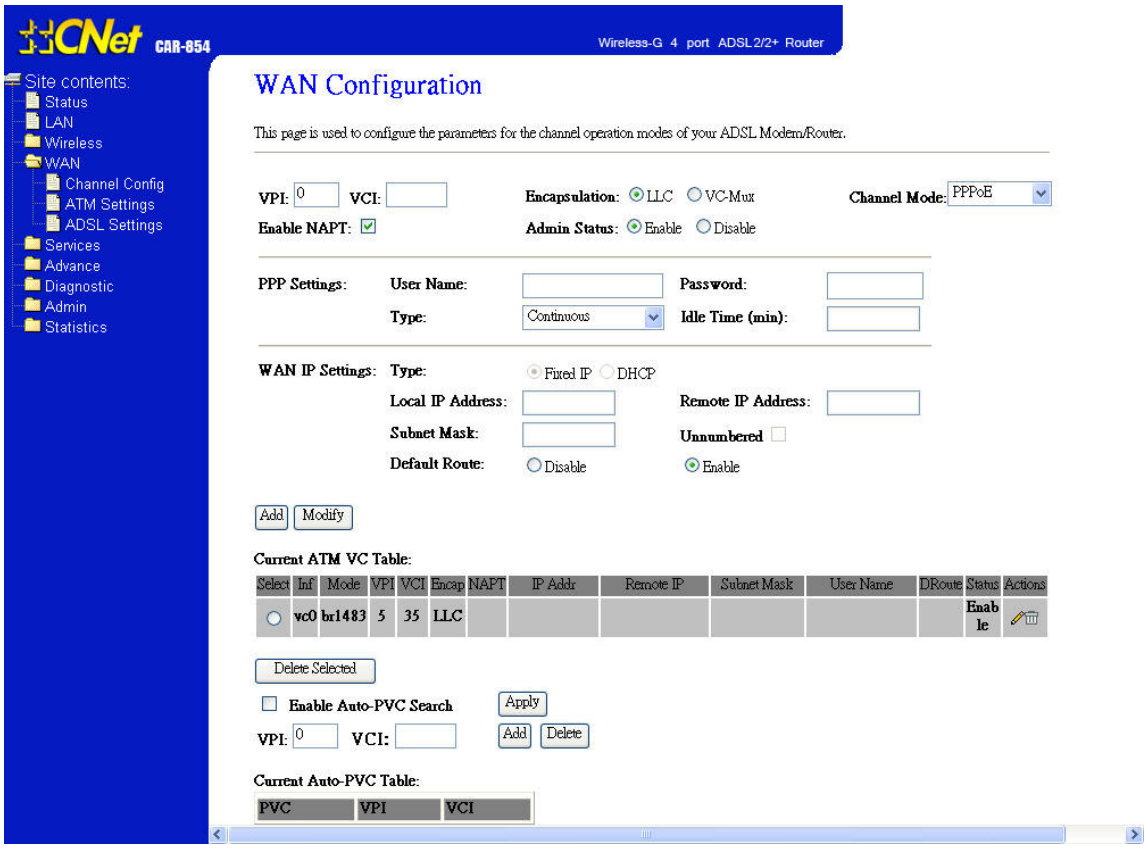
3 Set “Local IP Address:” according to the IP that ISP assign for your router. Set “Remote IP Address” to the ISP’s gateway.

4 Click “Add” button to add this channel into VC table.

5 Open the WEB page at “Admin/Commit/Reboot”. Press “Commit” to save the settings into flash memory.

6 The new settings will take effect after reboot the system.

6.3 PPPoE Mode



1 Open the WEB page at “WAN/Channel Configuration”.

2 Select the Channel Mode to “PPPoE”. Set the parameters VPI/VCI and Encapsulation mode according to the CO DSLAM’s setting.

3 Enter user/password from your ISP.

4 Click “Add” button to add this channel.

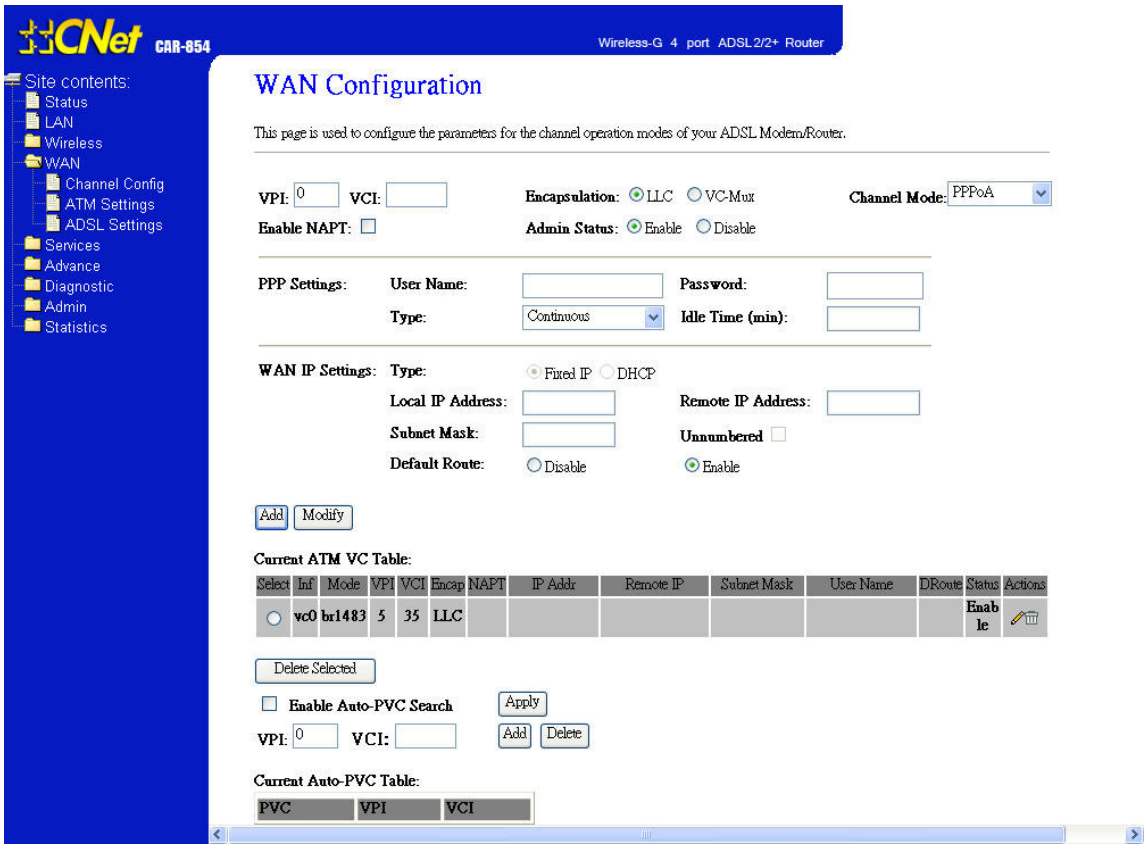
5. Enable DHCP server to allow the local PCs share the PPP connection.

6. Set DNS address from your ISP.

7. Open the WEB page at “Admin/Commit/Reboot”. Press “Commit” to save the settings into flash memory.

8. The new settings will take effect after reboot the system.

6.4 PPPoA Mode



1 Open the WEB page at “WAN/Channel Configuration”.

2 Select the Channel Mode to “PPPoA”. Set the parameters VPI/VCI and Encapsulation mode according to the CO DSLAM’s setting.

3 Enter user/password from your ISP.

4 Click “Add” button to add this channel.

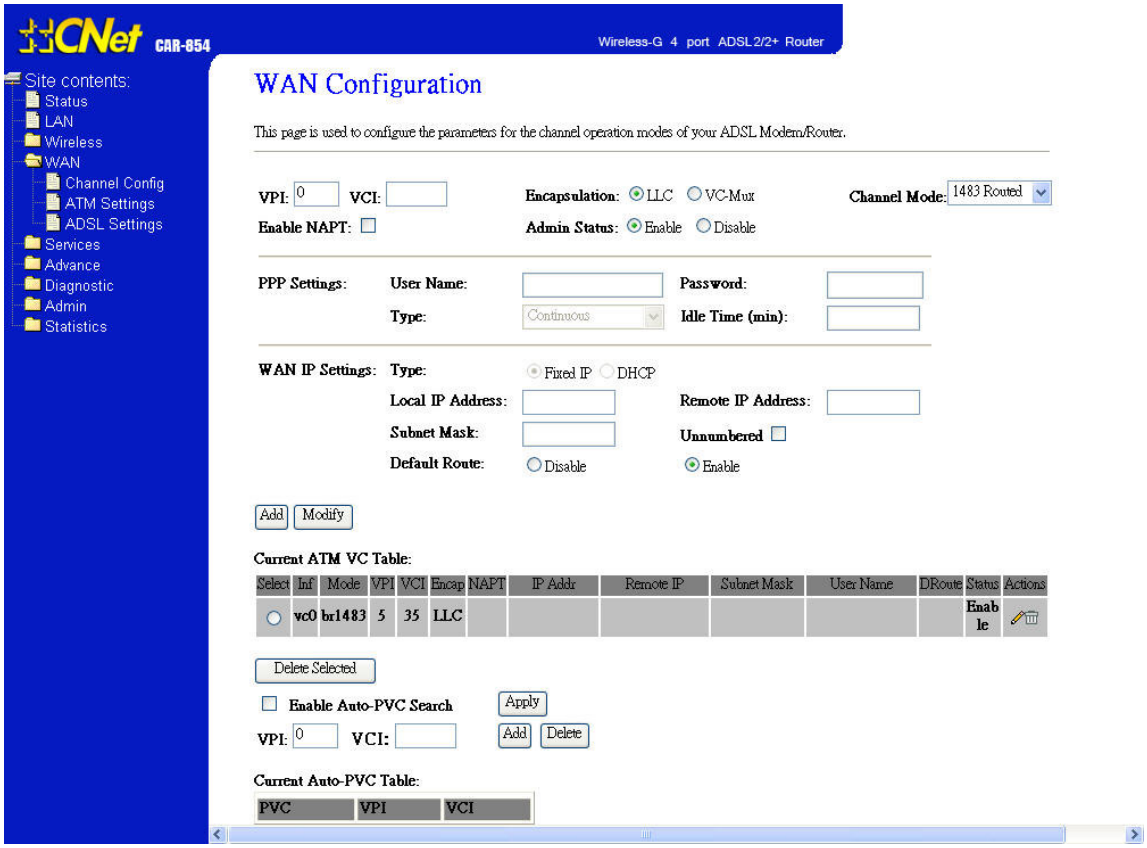
5. Enable DHCP server to allow the local PCs share the PPP connection.

6. Set DNS address from your ISP.

7. Open the WEB page at “Admin/Commit/Reboot”. Press “Commit” to save the settings into flash memory.

8. The new settings will take effect after reboot the system.

6.5 1483 Routed Mode



1 Open the WEB page at “WAN/Channel Configuration”.

2 Select the Channel Mode to “1483 Routed”. Set the parameters VPI/VCI and Encapsulation mode according to the CO DSLAM’s setting.

3 In WAN IP settings, give the local and remote IP address from your ISP or use DHCP to get them automatically if your ISP support it. Local IP is the address of ADSL router. Remote IP is the ISP’s gateway address.

4 Click “Add” button to add this channel.

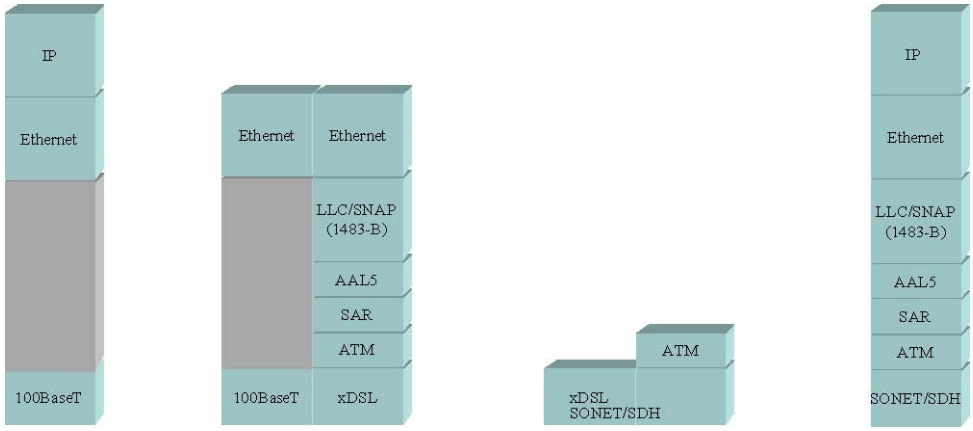
5 Open the WEB page at “Admin/Commit/Reboot”. Press “Commit” to save the settings into flash memory.

6 The new settings will take effect after reboot the system.

Appendices

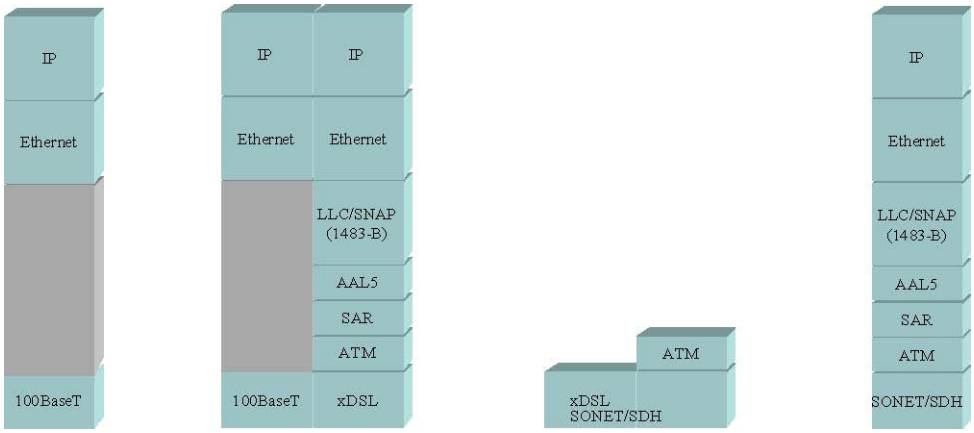
Appendix A: Protocol Stacks

6.5.1 A.1 1483 Bridged Model



1483 Bridged Channel Mode Scenario

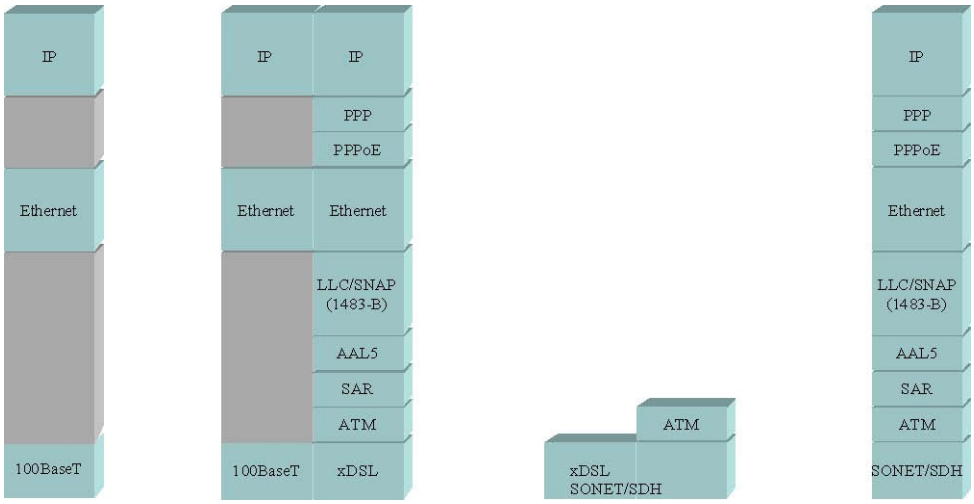
6.5.2 A.2 1483 MER Model



PC **ATU-R** **DSLAM** **BRAS**

1483 MER Channel Mode Scenario

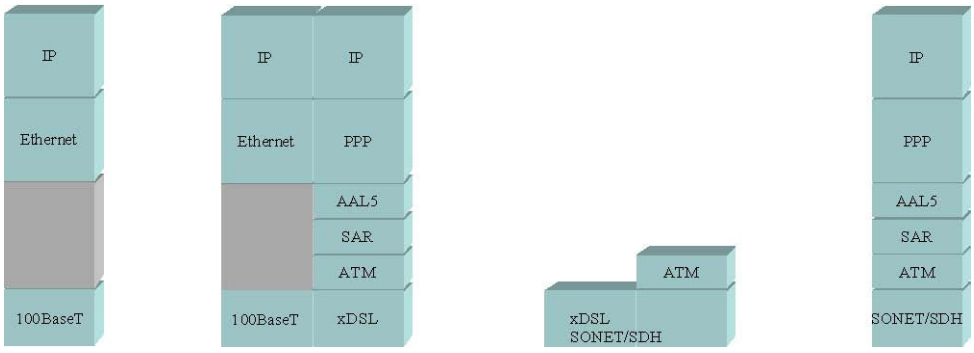
6.5.3 A.3 PPPoE Model



PC **ATU-R** **DSLAM** **BRAS**

PPPoE Channel Mode Scenario

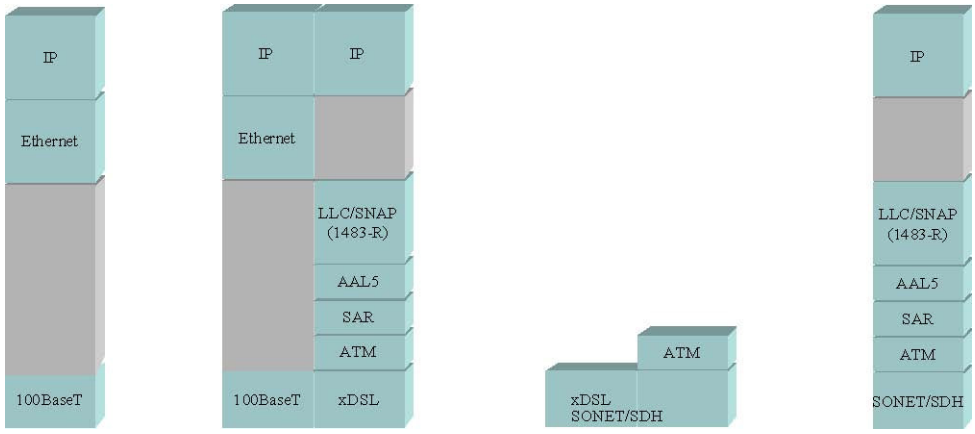
6.5.4 A.4 PPPoA Model



PC **ATU-R** **DSLAM** **BRAS**

PPPoA Channel Mode Scenario

6.5.5 A.5 1483 Routed Model



PC **ATU-R** **DSLAM** **BRAS**

1483 Routed Channel Mode Scenario